Hitt. *laḫḫurnuzzi-* [nt./c.] 'foliage', Luw. **laḫḫur* and Proto-Gk **ἐλαίϝᾱ* 'olive-tree'

Romain Garnier
Université de Limoges

The present paper aims at reassessing the vexing etymology of Hitt. *laḫḫurnuzzi-* [nt./c.] 'leafage, leavy branches, foliage, greenery (of trees or shrubs); woven mat or carpet'. So far, the main conundrum is to account for the presence of *-uzzi-* (a productive suffix for instrumental nouns), while the word under examination is everything but a tool or an implement, by contrast with *kur-uzzi-* 'cutter' or *išpand-uzzi-* 'libation vessel'. Besides, such forms are mainly deverbatives and Simon's (2013: 108) assumption of a denominative **laḫḫurn-iya-* '(?)' as the source of a deverbative *laḫḫurn-uzzi-* can hardly be upheld, even if a stem **laḫḫur-na* [coll.pl.] 'leafage, foliage' vs. simplex **laḫḫur* [nt.] 'leaf; leafy plant' may be assigned to Luwian, as proposed by Simon (*ibid.*). The derivational history of Hitt. *laḫḫurnuzzi-* will be outlined here with an alternative scenario and comparative evidence for Luw. **laḫḫur* (< PIE **h_1l-éh$_2$-u-r* 'leaf' ← **h_1l-éh$_2$-u-* [nt.] 'leaf' ← **h_1l-éh$_2$-u-* [adj.] 'leafy'), viz. Proto-Gk **ἐλαίϝᾱ* [f.] 'olive-tree' and **ἔλαιϝος* [m.] 'wild olive tree', from Proto-Gk **ἐλαιϝός* [adj.] 'leafy' – the reflex of PIE **h_1l-eh$_2$-i̯u-ó-* [adj.] 'leafy' (thematic variant of **h_1l-eh$_2$-i̯ú-*). Both forms can thus be assigned to PIE **$h_1$él-h$_2$-*, **h_1l-éh$_2$-* 'vegetal growth' of proterokinetic inflection, ultimately based on a primary root **$h_1$el-* 'to go out; to rise; to grow'.

1. Hitt. *laḫḫurnuzzi-* [nt./c.] 'leafage, leafy branches, foliage, greenery (of trees or shrubs)'

1.1 Forms and meaning

According to Kloekhorst (2008: 514), the original neuter gender of this noun is confirmed by the ergative plural *laḫḫurnuzziant*[*e-eš*]. Common gender forms are all plural and do not appear before New Hittite times in the famous expression "when the leafy branches (*laḫḫurnuzzieš*) seize (*appanzi*) the sun of heaven" (viz. "at sunset"), while the alleged

common gender singular nominative (†*laḫḫurnuzziaš*) is a ghost-word (CHD L: 17). The main bulk of the attestations is formed by the nominative/accusative *laḫḫurnuzzi* (either singular or plural), written *la-aḫ-ḫu-ur-nu-(uz-)zi*, *la-aḫ-ḫur-nu-uz-zi*, *la-ḫur-nu-zi* – being thus totally homophonous with the dative/locative singular *la-aḫ-ḫur-nu-uz-zi*, which appears often in the locution *laḫḫurnuzzi (šēr) dāi* (*tianzi*) "to place on the leaf-bed", renewed as a locative plural *laḫḫurnuzziaš dāi* "id." The postpositional *=šēr* used after the locative singular is a strategy to prevent the locution *laḫḫurnuzzi dāi* (*tianzi*) to be parsed as a direct object accusative singular or plural (viz. "to lay the foliage"). The singular is endowed with a collective meaning (viz. 'greenery, foliage'). Amongst others, it may refer to the foliage of trees and shrubs growing in the mountains:

> (i) *it laḫḫiya<<ya>>* ḪUR.SAG. ḪI.A ^{GIŠ}*la-aḫ-ḫur-nu-uz-zi* KUB 27.67 iii 64
> "Go and roam the mountains (and their) dense growth!" (CHD L: 15-16) [according to Puhvel (HED L: 25), this strong asyndeton is a partitive apposition: lit. *"the mountains, the foliage", viz. "the leafy mountains"]

Sometimes used to make wreaths (G. *Kranz*):

> (ii) 6 *KILĪLU-ya* ^{GIŠ}*alanzanaš la-aḫ-ḫur-nu-uz-z*[*i*...] *iyanda* KUB 32.123 ii 12f. .
> "six wreaths are made [from] the foliage of *alanzana*-trees" (CHD L: 16)
> - Hitt. **ḫaršan-alliya* [nt.pl.], from an oblique stem **ḫaršan* 'on the head'.
> - Hitt. *alanzana-* means 'alder' according to Puhvel (HED L: 27).

Or to make woven mats to lay sacrificial meat and bread thereupon:

> (iii) *nu* ^{GIŠ}*la-aḫ-ḫur-nu-uz-zi kattan išparranzi* KUB 9.32 obv. 38f.
> "they spray out foliage below" (CHD L: 16)
> (iv) *nu* ^{GIŠ}*la-aḫ-ḫur-nu-zi waḫnume*[*n*] KUB 18.15 obv. 15
> "we waved the mat/foliage" (CHD L: 17)

- Differently, Puhvel (HED L: 26) translates this passage as "we waved fronds."
- In fact, we are dealing here with an accusative of *result*, prompting a translation of *laḫḫurnuzzi* as "woven mat", but the text rather reads: *"we wove the foliage (into a mat)."

That the *laḫḫurnuzzi* is not a tool or an implement (neither is its close synonym *ḫappuria-* [c./nt.] 'arboreal greenery spread as cushioning or bedding', also used with *išpāri* 'to spread') makes it difficult to assign it to the other names in *-uzzi-*, which form a productive class of deverbative instrumental nouns, as duly pointed out by Kloekhorst (2008: 514). This is in contradiction with Simon's claim (2013: 108) that the Hittite form might be interpreted as stemming from a denominative verb **laḫḫurn-iya-* '(?)' → Hitt. **laḫḫurn-(iy)-uzzi-* (with regular "deletion" of the verbal *-iy-*suffix, as seen in Hitt. *išḫ-uzzi-* [c.] '*binder, band, belt, girdle' from *išḫ-āi/išḫ-iy-* 'to bind'). — First, the alleged verb **laḫḫurn-iya-* is not attested, and – should it have ever existed – what sort of meaning it would have been endowed with remains unknown: 'to grow a foliage'; 'to spread a leaf-bed' or even 'to weave a wreath'? A close look at the nouns with the *-uzzi-*suffix shows that the underlying verb is overwhelmingly transitive ('to cut'; 'to bind'; 'to pour'). Besides, to my very best knowledge, the base-verb is almost always the weak stem of a primary verb (for which, see below §1.2.2), with the notable exception of ^{KUŠ}*annanuzzi-* [c.] 'halter' from *annanu-*^{zi} 'to train, to educate' and ^{NA4}*kunkunuzzi-* [c.] 'rock' (taken as a striking implement), from a reduplicated stem **kun-kun-* '*wiederholt schlagen*' (cf. below §1.2.3), but never from a denominative verb. — Second, it is most unlikely to assume that *laḫḫurnuzzi* would have been originally a designation for 'weaving material' before becoming a generic name for the living foliage growing on trees. All in all, the assumption of an unattested verb is only triggered by the fact that the instrumental nouns in *-uzzi-* are a productive class of deverbatives.

As a result, an etymon **laḫḫurn-iya-* may be dispensed with. Thereafter follows a survey of Hittite nouns in *-uzzi-* (§1.2), encompassing all the relevant material, and a new

scenario of the derivational history of Hitt. *laḫḫurnuzzi-* is proposed (§1.3).

1.2 Hitt. nouns in *-uzzi-*: a survey

There are ca. 20 Hittite nouns in *-uzzi-*. Most of them are productive instrumental nouns, coined on the zero grade of primary transitive verbs. The category is overwhelmingly animate, but many neuter are met with, which is not to be expected here if we are dealing with the reflex of PIE **-tí-* oxytone animate action nouns, as pointed out by Melchert (1984: 166). Canonically, they are derived from the zero grade of a verb, cf. *kur-uzzi-* 'cutter' from *kuer-/kur-* 'to cut' (< PA [virtual] **k^{w}r-u-ti-*). Rieken (1999: 476) assumes that Hitt. *-uzzi-* stems from an agglutination of suffixes **-u-ti-*. Thereafter, the relevant material is classified in five categories: inherited formations (§1.2.1); productive instrumental nouns on weak stem of the present stem (§1.2.2); non-radical deverbative formations (§1.2.3); words from unattested or obscure present stems (§1.2.4); non-deverbative words of obscure formation and origin (§1.2.5). Then (§1.2.6), a possible origin of the *-uzzi-*suffix will be suggested.

1.2.1 Inherited formations

(i) Hitt. *luzzi-* [nt.] 'forced service, public duty, corvée'
From *lā-/li-* 'to release, to set free' (PIE **lóh$_1$-/*lh$_1$-* 'to let'), viz. 'work which releases one from one's obligation' as per Melchert (1984: 166), accepted by Kloekhorst (2008: 536), but PIE **lh$_1$-u-tí-* [c.?] should undergo the regular metathesis of laryngeals (surfacing as PIE ***luh$_1$-tí-* > Hitt. ***lūzzi-* [c.], not *luzzi-* [nt.]). As a result, it was barytone (viz. [virtual] PIE **lh$_1$-ú-ti-*).[1]

(ii) Hitt. *tuzzi-* [c.] '(military) camp, army, military forces'
Base-stem of a denominative *tuzziye/a-* 'to encamp'. That the Hittite form stems from a verbal locution *katta≈dāi* + dat./loc. 'to besiege' (cf. G. *belagern* 'to besiege' vs. *Lager* 'camp', lit. *'to set up the camp') has been convincingly demonstrated by Melchert (1984: 166), so *tuzzi-* [c.] is root-related to *dāi* 'to put'

[1]For the accentual constraints of laryngeal metathesis, see Garnier and Sagot (2019: 32).

(gl. *castra ponere*), pointing to [virtual] PIE *$d^{h}h_1$-*ú-ti-* 'action of setting'.

(iii) Hitt. *išḫuzzi-* [c.] 'band, belt, chain, girdle'

Another radical formation etymologically related to the *-i-*present *išḫāi/išḫiyanzi* 'to bind'. According to Hoffner and Melchert (2008: 61), deletion of the *-i-*suffix is regular, by contrast with Hitt. *išḫiyūl* [nt.] (written *iš-ḫi-ú-ul*) 'binding; obligation; treaty' (< PA **sH-iy-ú-lon*), which is built on the present stem. Base-stem of a denominative verb *išḫuzziye/a-* 'to gird' (prtcpl. *išḫuzziyant-* 'girt'). Those two nouns (viz. *tuzzi-* [c.] 'camp, army' and *išḫuzzi-* [c.] 'belt, chain') are undeniably deradical and not deverbative, according to Melchert (2016: 195). The progressive grammaticalisation of the suffix could operate via the *-uzzi-*stems associated to root-presents (cf. §1.2.2).

1.2.2 Productive instrumental nouns on weak stem of the present stem

(i) Hitt. $^{(DUG)}$*išpanduzzi-* [nt.] 'libation, libation-vessel'

This noun is – at least synchronically – built on the weak stem of *išpānt-*^{i}*/išpant-* 'to libate, to pour, to sacrifice', originating from PIE **spónd-ei̯/*spn̥d-énti* (Kloekhorst 2008: 405). There is also a secondary derivative ^{LÚ}*išpanduzziy-ala-* [c.] 'libation-bearer'. The alleged base-stem †*išpand-u(wa)-* [c.] 'small and precious metal vessel', wrongly interpreted as an *-u-*stem by Kronasser (1966: 241) and Tischler (HEG A-K: 415) is in fact a free-standing genitive[2] ^{DUG}*išpand-uwaš* [c.] '(vessel) of libation', stemming from the verbal noun **išpanduwar/šippanduar* (*ši-ip-pa-an-du-wa-ar*, *ši-ip-pa-an-du-u-wa-ar*), gen. **išpanduwaš* [nt.] 'of libation' – as correctly stated by Puhvel (HED E/I: 437), followed by Tischler (2001: 152).[3]

[2]"The free-standing genitive (*Freischwebender Genetiv*) is a Hittitological term for a genitive case noun (possessor) whose synthetic head (possessum) does not appear in a sentence surface structure" (Yakubovich 2006: 39). Many tools or implements are built according to this pattern, for instance Hitt. **kattan* (GAM) *tiyannaš* '(tool) for laying down'.

[3]According to Yakubovich (2016: 202), the graphic variation between *išpa-* /ɨsp/ and *šipa-* /sɨp/ represents a free allophonic variation of a (mobile) reduced vowel at the complex onset, not pointing to two distinct verbal stems, while Melchert (2016: 196) assumes for the later a PA **spe-sp-* onset, reflecting a PIE reduplicated aorist (which would account quite well for the telic

(ii) Hitt. ^{GIŠ}*išpar(r)uzzi-* [nt.] ‘rafter, roof batten’

Frequently ^{GIŠ}*iš-pa-ru-uz-zi-* but also written ^{GIŠ}*iš-pár-ru-uz-zi-* with optional geminate as in the weak stem of the related verb *išpār-^{i}/išpar(r)-* ‘to spread out, to strew’ (< PIE **spór-eu̯/*spr-énti*). This noun is attested by Old Assyrian (Neša/Kaniš) *išpuruzzinnum* (Kloekhorst 2008: 31), which points to a pronunciation /ɨsporut^{s}i/ vs. “regular” /ɨsparut^{s}i/ (< PA **spr-u-ti-*), according to Simon (2015: 362). The semantics of the instrumental noun are not consistent with the attested meanings of the verb. Indeed, *išpār-^{i}/išpar-* is abundantly used for spreading a hunting net or spreading arboreal greenery, but never refers to the covering of a thatched roof (Hitt. *šuḫḫa-warḫui*). Tischler (HEG A-K: 419) assumes the acception of ‘*ausbreiten*’ for the verb, which prompts a translation as ‘*Brett zum Ausbreiten*’ for the instrumental noun, but this is simply *ad hoc*, since *išpār-^{i}/išpar(r)-* is never used with ‘beam’ or ‘rafter’ as a direct object accusative.

We must remember the fact that G. *ausbreiten* ‘to spread out’ is the canonical translation of Hitt. *išpār-^{i}/išpar(r)-* (Oettinger 1979: 266; Tischler 2001: 66), but G. *ausbreiten* (lit. *‘to make wide’) almost shares the same polysemy as E. *to spread*: it means not only ‘open out (something) so as to extend its surface area, width, or length’, but also ‘to extend over a large or increasing area’, ‘to stretch’ (being thus totally synonymous with *ausstrecken* ‘to strech’). As a result, *išpār-^{i}/išpar(r)-* ‘to spread out, to strew’ is glossed by Oettinger (1979: 266) as ‘*ausbreiten*, *ausstrecken*’. That the underlying PIE root **sper-* (LIV^{2}: 580 ‘ausstreuen, zerstreuen’) simply means ‘to scatter, to form a layer by scattering, to strew’ (Fr. *(r)épandre*) is confirmed by Gk σπείρω (< PIE **spér-i̯e/o-*) ‘to sow, to seed’ and δια-σπείρω ‘to disperse’ vs. κατα-σπείρω ‘to scatter’.

Puhvel’s (HED E/I: 444) vague attempt of glossing Hitt. ^{GIŠ}*išpar(r)uzzi-* [nt.] ‘rafter’ by *‘stretcher’ (involving another abusive verbal meaning of *išpār-^{i}/išpar(r)-* as *‘to stretch’) has little to recommend itself. We must keep in mind that Hittites

Aktionsart of the verb). The definitive answer to this vexing issue will not be dealt with in the present paper. Should Melchert’s scenario be correct, the absence of a variant **šipanduzzi-* would support the idea that *išpanduzzi-* is deradical.

ignored hipped roofs. The Hittite name for 'roof', *šuḫḫ(a)-* [c.] 'flat roof' (made of clay, G. *Lehmflachdach*) can hardly be separated from the verb *šuḫḫ-* 'to scatter' (< PIE **suh₂-*)[4] semantically close to 'spreading' and 'strewing'. I would tentatively gloss ^{GIŠ}*išpar(r)uzzi* [coll.pl.] as 'horizontal woodwork upon which the newly scattered clay is spread; *spreader*'. The seldom variant ^{GIŠ}*iš-pár-ru-uz-zi* /ɨsparrut^{s}i/ with geminates is perhaps due to a folk-etymology associating the verb *išparra-^{i}/išparr-* 'to trample (upon)' and 'to make a step' (G. *treten*), such roofs being walkable.

(iii) Hitt. ^{URUDU}*kuruzzi-* [?] '(copper) tool for cutting'

In close relation with *kuer-/kur-* 'to cut'; gender unknown: only instr. sg. *ku-ru-uz-zi-it* (NS). In a list of bronze implements for digging sacrificial pits.

(iv) Hitt. **laḫuzzi-* [?] 'pot; vessel for pouring' (?)

Only reflected by Old Assyrian (Neša/Kaniš) *luḫuzinnum* '(?)' (Kloekhorst 2008: 32), with a variant *luḫusinnum*. Surely related to Hitt. *lāḫu-/laḫḫu-* 'to pour a liquid' from PIE **lóh₃-u-/*léh₃-u-* (Melchert 2011: 130). Cf. also Hitt. *laḫḫu-* [c.] 'large vessel' (= *LAḪTANU* 'bier vat') and Toch. B *lwāke* 'pot' < Proto-Toch. **luwā̆kæ* < PIE **luh₃-kó-* < **lh₃-u-kó-* (with laryngeal metathesis) as per Garnier and François (2020: 52).

(v) Hitt. *warpuzi-* [nt.] 'object used by bathing' (?)

Technical noun built from *warp-^{zi}* 'to wash, to bathe' (PIE **u̯erp-* 'to spin').

1.2.3 Non-radical deverbative formations

(i) From a *-nu-*present

Hitt. ^{KUŠ}*annanuzzi-* [c.] 'part of a harness', perhaps 'halter' (?), cf. *annanuzziyant-* [prtcpl.] 'haltered'. An instrumental noun from *annanu-^{zi}* 'to train, to educate', analogically built on the *-nu-*present. The segmentation as *annanu-zi-* by Melchert (1984: 166) implicitely suggest a PIE **-tí-* action noun (with the same pattern as Gk ἄνυσις [f.] 'success, accomplishment' vs. Hom. ἄνυμι 'to effect, accomplish'), which is in fact

[4]See for instance Rieken's (1999: 66) claim that "[d]ie semantischen Schwierigkeiten lassen sich durch den Hinweis auf die Konstruktionsweise der anatolischen Lehmflachdächer, die durch häufiges Aufschütten von neuem Lehm in Stand gehalten wurden, überwinden."

inconsistent with the *-uzzi*-nouns of neuter gender that cannot be dismissed.

(ii) From an intensive present stem

Hitt. ^{NA4}*kunkunuzzi-* [c.] 'rock' (taken as a striking implement). Attested in KUB 41.ii 39 ^{NA4}*ku-un-ku-nu-uz-it wa-al-aḫ-ḫa-na-i* 'he strikes with a *kunkunuzzi-*' [instr.]. The form is totally deverbative in this case, originating from a reduplicated stem **kun-kun-* '*wiederholt schlagen*' (cf. *kuen-* 'to strike, to smite, to kill') as per Carruthers (1933: 154-155). Interestingly, it is not only a stone implement, but also a personified 'Rock' in the song of Ullikummi, viz. a stone-monster born of an impregnated rock (HED K: 254). *Pace* Kloekhorst, PIE **g$^{\text{u̯}\text{ḫ}}$n̥-g$^{\text{u̯}\text{ḫ}}$n-u-ti-* (2008: 494) is surely anachronistic. This expressive word is coined after an otherwise unattested Hittite intensive verbal stem **kun-kun-* 'to strike repeatedly' (with a club or an axe, perhaps even a slingshot ball, as the underlying PIE root **g$^{\text{u̯}\text{ḫ}}$en-* 'to smite' may not only refer to hand weapons but also to missile weapons, as is clear from AV. *vadarə jaiδi* [imp.2.sg.] = RV *jahí vádhaḥ* "throw the *vadhar*!", from PIE **g$^{\text{u̯}\text{ḫ}}$n̥-d$^{\text{ḫ}}$i*).

1.2.4 Words from unattested or obscure present stems

(i) Hitt. $^{(UZU)}$*appuzzi-* [nt.] 'animal fat, tallow' (Kloekhorst 2008: 195)

At its face value, $^{(UZU)}$*appuzzi-* looks like an instrument noun in *-uzzi-*, but the present stem *epp-/app-* 'to take, to seize' makes no sense. Should the word be a deverbative, its meaning would be something like *'implement for seizing'. The tallow is not a tool, but a substance. The assumption of Hitt. 2-**app-* 'to grease' as per Puhvel (HED A: 104) is hindered by textual evidence, which clearly shows that the *appuzzi-* is not used for greasing wheels, but rather points to tallow used in sacrifices, for modelling small figures, as in KBo 12.2 I 22, [*nu* U]R.TUR.RA *appuziaš ienzi* "they make a small dog of tallow" (HED A: 103). This item rather belongs to the next Section (§1.2.5).

(ii) Hitt. *išgapuzzi-* [nt.] 'a cult object'

Hapax legomenon attested in KUB 12.8 i 16, in a list of (bronze) implements. Surely associated to a verb *išgāp-*^{i}*/išgap-* (*iš-ga-a-pí* KUB 12.8 i) of unknown meaning (Kloekhorst 2008: 399).

Puhvel's account of *išgāp-*^{i}*/išgap-* by PIE **skeb^{ĥ}-* 'to dig, scrape' (HED E/I: 415) is nothing more than an educated guess.

(iii) Hitt. ^{GIŠ}*kattaluzzi-* [nt.] 'threshold'

Very obscure formation. See also *kattera- kattaluzzi-* 'doorstep'. This technical word cannot originate from a verbal locution **katta lā-* 'to let down, put down' as formerly proposed by Hoffner (1966: 533). Kloekhorst (2008: 464) posits the univerbation of prepositional *katta* 'beside' and **luzzi-* 'opening, *door' (an assibilated — otherwise unattested — variant or Hitt. *luttai-/lutti-* [nt.] 'window'). Accepted by Nikolaev (2010: 201). Until further evidence becomes available, the question must remain open.

(iv) Hitt. ^{UZU}*wappuzzi-* [nt.pl.coll.] '(sheep) tallow'

This word occurs only once, and is accounted for as a graphic variant of $^{(UZU)}$*appuzzi-* (*q.v.*) by Tischler (2001: 194; HEG W: 297-298). Tischler convincingly identifies ^{UZU}*wappuzzi=ya tepu…dāi* "he takes a little amount of tallow" (KUB 27.1 I 39 [New Hittite; festival context]) with ^{UZU}*appuzzi=ya tepu…dāi* (KUB 47.64 ii 76). The vacillation at the onset may be due to a foreign (Hurrian) origin. This item rather belongs to the next Section (§1.2.5).

1.2.5 Non-deverbative words of obscure formation and origin

Hitt. $^{(GIŠ)}$*intaluzzi-* [nt./c.] 'shovel' or the like (of wood or stone according to Puhvel HED E/I: 373); Hitt. ^{GIŠ}*ḫariuzzi-* 'a kind of table made of woven reeds'; Hitt. ^{NA4}*karpuzzi-* 'a precious stone'; Hitt. ^{NA4}*kirnuzi-* and ^{NA4}*pišnuzi-* 'a mineral used in the preparation of glass'. Most of them – including *appuzzi-* 'tallow' and its doublet ^{UZU}*wappuzzi-* – are possibly loanwords (Hurrian might be a good candidate). With the notable exception of $^{(GIŠ)}$*intaluzzi-* [nt./c.] 'shovel', those technical terms, referring to devices or materials and not to implements, do not match at all with the productive *-uzzi-* instrumental nouns class.

1.2.6 Towards a possible origin of the *-uzzi-*suffix

This survey makes it clear that this small class of nouns was originally deradical, while the confusion between the zero grade of the root and the weak stem of ablauting root presents opened the path to a reanalysis as deverbative stems. The

combination of suffixes *-*u-ti-* lacks comparative evidence, all the more as some nouns in -*uzzi-* are undeniably of neuter gender and all are surely barytone (viz. *-*ú-ti-*). Tischler's strong objection (HEG T/3: 503) that "*tuzzi-* is not an instrument for installing" ("*tuzzi-* aber kein 'Mittel des Setzens'") needs to be addressed.

Stems like [virtual] PIE *$d^{h}h_1$-*ú-ti-* 'action of setting/placing' may be rather accounted for by a zero-graded -*u*-adjective: PIE *°$d^{h}h_1$-*ú-* [adj.] 'set; placed' (cf. PIE *me-$d^{h}h_1$-*ú-* [adj.] 'placed with; mixed' → PIE *$méd^{h}$-*u-* [nt.] 'mead, hydromel')[5] with the same pattern as Ved. *vanar-gú-* [adj.] 'moving about in woods, wandering in a forest' (< PIE *°$g^{u}h_2$-*ú-*) based on the Vedic meaning of Ved. *GĀ-* 'to go', which is echoed by Lith. *žmogùs* [m.] 'man' (< PIE *$d^{h}ĝ^{h}$-*m-eh₂≠*$g^{u}h_2$-*ú-* lit. 'stepping on the ground; human'),[6] which is surely older, as evidenced by the archaic meaning of PIE *$g^{u}eh_2$-

[5]As per Pinault (2003: 182), the semantic shift to 'wine' (Hom. μέθυ and CLuw. *maddu*) is due to the fact that Anatolian and Greek wines were honey wines (cf. Hom. μέθυ ἡδύ # 'the sweet wine'). I do not believe in a PIE root †*med^{h}-* 'to be sweet', as assumed by Steer (eDiAna, *s.v.* PA *$méd^{h}$-*u-*). PIE *me-$d^{h}h_1$-*ú-* [adj.] 'placed with; mixed' evolved into 'honeyed; sweet'. I do not follow Imberciadori (2022: 32), who assumes a color designation ("la bevanda oscura") from the PIE root *med^{h}-* reflected by Hitt. *andara-* [adj.] 'blue' (< PIE *$m̥d^{h}$-*ró-*), and OCS *modrъ* [adj.] 'blue' (< PIE *mod^{h}-*ró-*).

[6]According to Pinault (2011: 159), the first member is an allative case, built on the on zero grade of the athematic *-*om*-suffix. There is also evidence for reconstructing PIE *ni-$g^{u}h_2$-*ú-* [adj.] 'stepping downwards; diving': (i) Ved. *nigút-* [m.] 'enemy' points to an adjective *$nigú$-* 'lurking' whence arose a substantive ('evildoer') made with the characterizing morpheme *-*t-* (Kölligan 2008: 139). (ii) According to Garnier (2021a: 50), Proto-Gmc *nik-$wō^{z}$, *nik-was-un, *nik-uz-ez [m.] 'water monster' (OHG *nihhus* 'water-sprite') is an internal derivative of hysterokinetic inflection coined after PIE *ni-$g^{u}h_2$-ú-s-* [nt.] 'dive'. (iii) Gk βυθός [m.] 'depth (of the sea)', accounted for as a substratic word by Beekes (2010: 247), could – in fact – be a back-formation from βυθίζω 'to sink', being itself a stemming from κατα-βυθίζω 'to cause to sink'. The starting poing may be Gk *κατα-βύς [adj.] 'sinking' (<< PIE *ni-$g^{u}h_2$-*ú-* [adj.] 'stepping downwards; diving'), with renewal of the first member *ni-* by Gk κατα- 'down' and paradigmatic levelling of the reflex of the labiovelar by First Millenium Gk -β- (from nom.pl. *°βέϝ-ες). We may then assume a locative adverb *κατα-βύ-θι 'in the depth', base-stem of the denominative verb κατα-βυθίζω 'to cause to sink', which was reanalysed as a parasynthetic denominative verb (viz. 'to send [a ship] to the *bottom*' [Gk βυθός]).

'to be stable (cf. Gk βέβαιος); to stand firmly; to step', reflected by Hom. εὖ διαβὰς…ποσὶν ἀμφοτέροισιν (M 458) 'with the legs set well apart'. That such *°*CC-ú*-stems could produce an adverb is exemplified by Ved. *su-ṣṭhú* [adv.] 'aptly, fittly' (which is indeclinable in the RV). The base-stem is **su-ṣṭhú-* [adj.] 'in good place/state; prosperous', whence was coined an abstract *su-ṣṭhu-tā* [f.] 'welfare, prosperity' in the latter language.[7] This word can be traced back to Ved. °*sthú-* [adj.] 'standing' (< PIE *°*sth₂-ú-*).

The bare neuter ending was sporadically recharacterized with the ablatival/instrumental morpheme **-ti*, for which there is large evidence in Anatolian.[8] We may postulate a verbal locution such as PA **ḱanta*[9]*…dʔ-iy-*[10] 'to set down, to lay down' (without univerbation), reflected by Hitt. *katta dāi/tiyanzi* (meaning '*belagern*' when governing dat./loc.). After the inherited pattern of the *°*CC-ú*-stems, a PA deradical univerbated adjective **ḱanta-dʔ-ú-* [adj.] 'set down, installed' could be formed. The neuter singular **ḱanta-dʔ-ú* could become an adverb (like Ved. *su-ṣṭhú* [adv.] 'aptly, fittly'), but was eventually enlarged with the morpheme **-ti*, surfacing as **ḱanta-dʔ-ú-ti* [adv.] 'in position, in encampment'. We may

[7]Namely in the *Mahāvīra-caritra-* written by the famous Jain polygraph Hemacandra (1089-†1172).

[8]Cf. Hitt. *tū́waz* [abl. adv.] 'from afar' < Pre-Hitt. **tuwā́-tti* < PA **dwáH-ti* (< PIE **duḗh₂-ti*), cf. Rieken (1999: 69, 246); OH É-*er-za* /pert^{s}/ 'from inside the house' (< PA **pér-ti*); *an-dur-za* /an.durt^{s}/ [adv.] 'indoors' (< PA **en̯-dúr-ti*). Luwian *máššanadi* [abl./instr.] 'from the god(s); by the god(s)' (< PA **-o-di* [lenited]) – indifferent to number, like Hom. θεόθεν 'from the gods' vs. Hom. οὐρανόθεν 'from the sky'. Luwian shows renewed nominal endings from the pronominal inflection, as is clear from CLuw. *ku-wa-at-ti* /k^{w}atti/ 'from which?' (< PIE **kʷó-ti*). The ablative eventually expressed the agent of a passive participle ("loved by the gods" < *"from the gods"), serving first as agentive instrumental, then as comitative instrumental: Lyc. *esbedi* (44a, 36) 'with the horses' (< PA **-o-di* [lenited]). For a survey of **-ti* in PIE, see Melchert and Oettinger (2009: 57-59).

[9]HLuw. */t^{s}a^{n}da/ 'down' points to PA **ḱantă* 'κατά' as per Goedegebuure (2010: 314).

[10]The athematic *-i-*present reflected by Hitt. *dāi-/tiyanzi* 'to put' is from PIE **d^{h}h₁-ói̯-ei̯*, **d^{h}h₁-iu̯-énti* with ablauting suffix according to Kloekhorst (2008: 808), while Jasanoff (2003: 99) reconstructs PIE **d^{h}óh₁-i̯-ei̯*, **d^{h}h₁-iu̯-énti*, with ablauting root. As no consensus is reached concerning the strong stem, I prefer to write down the weak one only.

then reconstruct Hitt. **katta-tuzzi-yant-* [prtcpl.] 'placed in position/in encampment', from which originates not only a simplex *tuzziye/a-* 'to encamp' (viz. with the army), but also a back-formed animate noun *tuzzi-* 'military camp, army' (which is *not* an instrumental noun!).

Interestingly, the same *Derivationskette* is met with in Greek, making the derivational sketch of Hitt. *tuzzi-* less isolated: Hom. διαπρύσιος* [adj.] 'piercing' is the base-stem of διαπρύσιον [adv.] 'piercingly' (not an "Æolic" polar **-tió̯-* derivative of διαπρό 'right through; from end to end' *pace* Beekes 2010: 330), related to δια-πείρω 'to pierce' (< PIE **pér-i̯e/o-*), base of *δια-πρ-ύς [adj.] 'piercing' (< PIE *°*pr-ú-*) → *δια-πρ-ύ-τι [adv.] → *δια-πρ-ύ-τι-yος [adj.] 'penetrating, piercing' (Hom. διαπρύσιος*).

Some of the *-uzzi*-nouns may be accounted for as based on former indeclinable adverbs: for instance, **luzzi* 'with release' was associated to a verb 'to do, to work' (Hitt. *aniye/a-*), being eventually reinterpreted as 'to perform the *l.*', cf. KBo 6.4 iv 13-14, *mān=an=kan* LUGAL-*uš=ma arauwaḫḫi nu lu-uz-zi UL iyazzi* "If the king, however, exempts him, he shall not perform the corvée" (CHD L: 90). The same can be said about Hitt. *išpantuzzi* attested in a figura etymologica *išpantuzzi šipant-* 'to libate libations' with an accusative of the inner object: *išpantuzzi* is parsed as a neuter accusative plural in KUB 33.103 ii 5, NINDA.KUR$_4$.R]A*=ya=šma*<*š*> *išpantuzzi namma ŪL kuiškui šipanti* "breadloves (= Hitt. **ḫaršauš* [acc.pl.c.])[11] [and] libations nobody will offer you anymore" (Puhvel HED E/I: 437). In fact, we may reconstruct here PA **spand-ú-ti spónd-* 'to libate with libations'.

Three among the four common gender *-uzzi*-nouns (*tuzzi-* 'military camp'; *išḫuzzi-* 'band, belt chain, girdle' and *annanuzzi-* 'halter') are associated to a denominative present stem: *tuzziya/e-* 'to encamp' (from **katta tuzziyant-* 'placed in encampment'); *išḫuzzi-yant-* 'girt' and *annanuzzi-yant-* 'haltered'. This repartition is surely not due to chance. The only exception is ^{NA4}*kunkunuzzi-* [c.] 'rock' – taken as a striking

[11]Read NINDA.GUR$_4$.RA = ^{NINDA}*ḫarši-* [c.] '(bread)loaf', G. *Dickbrot* as per Tischler (2001: 231). The clitic *=ya* is regular after sumerograms (it stands for Hitt. **ḫaršauššа*).

implement, but also as an animate stone-monster. The remaining material is of neuter gender: *luzzi-* 'corvée'; *išpantuzzi-* 'libation(-vessel)'; *išparuzzi-* 'rafter'; *warpuzzi-* 'object used by bathing'; *išgapuzzi-* 'a cult object'; *kattaluzzi-* 'threshold'. The gender of *kuruzzi-* 'cutter' (NS) and **laḫuzzi-* 'pot; vessel for pouring' (?) is unknown. Leaving aside the alleged Hurrian loanwords refering to mineral substances or the name for 'tallow' (§1.2.5), which are not relevant here, it appears that only $^{(GIŠ)}$*intaluzzi-* [nt./c.] 'shovel' (a loanword) and *laḫḫurnuzzi-* [nt./c.] 'foliage' hesitate between animate and non-animate.

Lastly, mention should be made of HLuw. (ALA)*a-ru-ti-sá* /arutis/ [c.] 'basket' (< 'wing', cf. CLuw. *aruta* [coll.pl.] 'wings'), which has been interpreted as an action noun **ar-u-ti-* [c.] 'fitting, joint' → 'wing' to the root **ar-* 'fit' (cf. Gk ἀραρίσκω 'fit together, join') by Melchert (1988: 225). This analysis is falsified by three objections: (i) the root **ar-* 'to fit' is not attested as a verbal root in Anatolian, which hinders the assumption of a productive instrument noun; (ii) HLuw. */arutis/ [c.] 'basket' can hardly be kept apart from CLuw. ^{GIŠ}*ariy-al-* [nt.] 'basket', which is a deverbal instrumental noun to CLuw. *ari-*^{tti} 'to lift, to carry'; (iii) CLuw. *aruta* [coll.pl.] 'set of wings' (*a-ru-ta*, instr.pl. *a-ru-ta-ti* or *a-ru-ú-da-ti* /arudā́di/) would require an analogical deletion of the inherited *-i-* due to the *-i-*motion declension.

In my opinion, one may rather compare PA **ʔar-ú-* [adj.] 'high' (< PIE **h₃r-ú-*), reflected by CLuw. *aru-* 'id.', which is root-related to the causative verb *ari-*^{tti} 'to lift, carry'. We may assume PA **ʔər-ú-t-* [c.] *'lifter' → 'wing' (or *'carrier' → 'basket'), built with the "characterizing" morpheme **-t-*. This animate noun would then regularly surface as Luw. **arutt(i)-* with *-i-*mutation (cf. HLuw. /arutis/). It was independently coined PA **ʔar-u-t-ā́-* [coll.pl.] 'set of wings' (lenited as **ʔar-u-d-ā́-*). Incidentally, the wings referenced in KBo 12.100, belong to eagles. The Anatolian name for 'eagle' is documented by Hitt. *ḫāran-* [c.] (< PIE **h₃ér-on-* 'flying high, soaring, *altivolans*') as per Kloekhorst (2008: 301), surely from the PIE root **h₃er-* 'to rise, to be high' – the eagle being the soaring bird par excellence.

1.3. Derivational history of Hitt. *laḫḫurnuzzi-*

The form *laḫḫurnuzzi* [nom./acc.nt.sg./pl. and dat./loc.sg.] is the starting point of the whole paradigm, which is in fact secondary (for which see above §1.1). Indeed, other nouns in *-uzzi-* show little inflection, being mostly attested in these cases. In my opinion, Hitt. *laḫḫurnuzzi* [nt.] 'foliage' (with collective meaning by contrast with the "discrete" animate plural *laḫḫurnuzzieš* [nom.pl.c.] 'leafy branches') is a reshaping of Hitt. **laḫḫurnezzi* [nt.] 'luxuriance', from an essive **laḫḫurnē-* 'to be luxuriant'. This (rare) suffix appears in Hitt. *utezzi* [nt.] 'wetness' and LUGAL-*uezzi* [nt.] 'kingship' (**ḫaššuezzi*), accounted for by Melchert (2021: 380-381) by old neuter **-ti*-stems. He similarly posits **-u-ti*-action nouns of neuter gender to account for the suffix *-uzzi-* (Melchert 2021: 382-383). In my opinion, the suffix *-ezzi-* is due to a PA recharacterization of the instrumental **-ǣ* (< PIE **-eh*$_1$) as PA **-ǣ-ti* (with derivatives in **-ǣ-ti-yónt-* 'being in the state of X' > Hitt. *-ezziyant-**). The reshaping of **laḫḫurnezzi* [nt.] as *laḫḫurnuzzi* [nt./.c.] could be motivated by two reasons: (i) the more concrete meaning of nouns in *-uzzi-* (viz. 'foliage, greenery'); (ii) the capacity of inflecting the form as a plural of common gender (*laḫḫurnuzzieš* [nom.pl.c.] 'leafy branches').

2. Etymology of Luwian **laḫḫur*

2.1 Luw. **laḫḫur* [nt.] 'leaf' and its derivatives

Simon (2013: 108) reconstructs Luw. **laḫḫur* [nt.] 'leafy vegetation' as the donor form of Arm. *laxowr* 'celery; parsley'. This was already proposed by Greppin (1981) and followed by Puhvel (HED L: 28), but with a wrong assignation to Hittite. Indeed, a stem **laḫḫur* [nt.] 'leaf; leafy plant' could be the base-stem of a typically Luwian secondary derivative in *-na-*, as duly stated by Simon (*ibid.*). We may therefore assume a collective **laḫḫur-na* [coll.pl.] 'leafage, foliage', with the same pattern as **ḫīla-na* [coll.pl.] 'gate(-house)', surely reflected by HLuw. PORTA-*la-na*, and whose base-stem would be Luw. **ḫīla-* (cf. Hitt. *ḫīla-* [c.] 'courtyard') as per Melchert (2003: 196).

2.2 Is Hitt. ^{GIŠ}*laḫḫura-* 'wooden stand for pots and offerings' related?

Hitt. ^{GIŠ}*laḫḫura-* [c.] 'wooden stand or table for pots and offerings' – "an object made partly of wood, occasionally plated with precious metals" (CHD L: 15) is sometimes assumed to be etymologically related to Hitt. *laḫḫurnuzzi-* [nt./c.] 'foliage' (Puhvel HED L: 28), allegedly from a root 'to cut (wood)', but that does not make any sense, since Hitt. *laḫḫurnuzzi-* 'foliage; greenery' has nothing to do with woodwork. This confusion prompted a wrong translation of Hitt. *laḫḫurnuzzi-* as 'portable altar table' (G. *transportabler Altartisch*) by Kronasser (1966: 241). This connection may be dispensed with, as per Kloekhorst (2008: 514). However, Simon (2013: 108) allows the question to remain open ("*eine Verbindung wäre möglich*"). In fact, Simon still mentions Puhvel's outdated comparative material, such as Lith. *lóva* [f.] 'plank', which is unrelated to Luw. **laḫḫur* [nt.] 'leaf; leafy plant' and Hitt. *laḫḫurnuzzi-* 'foliage', but could be accounted for by the verbal abstract **léh₂-u-* [nt.] 'cutting' reconstructed by Nikolaev (2010: 202). As a result, one must separate Hitt. ^{GIŠ}*laḫḫura-* [c.] *'woodwork' (< PIE **leh₂-u-ró-* [adj.] 'cut; hollowed') and Lith. *lóva* [f.] 'plank' (< [virtual] PIE **leh₂-u̯-éh₂*) from Luw. **laḫḫur* [nt.] 'leaf; leafy plant'.

2.3 Towards a possible PIE root

Luw. **laḫḫur* [nt.] 'leaf; leafy plant' cannot be accounted for by the PIE root **leh₂-* 'to cut, to split', but there is a PIE telic root **h₁elh₂-* 'wohin treiben' (LIV^2: 235) based on Gk ἐλάω (aorist ἐλάσαι) 'to press forward, drive, urge' and Arm. *el-anem* (root-aorist *el-i*) 'to come out/to go out; to rise, ascent, mount', causative **eluz-anem* 'to extract, produce, *make come up (of plants)' (cf. *eluz-umn* 'shoot, sprout') and *el-ust* (gen./dat. *el-st-ean*) 'egress, the going out, growing of plants' (Martirosyan 2010: 248-249). The root was possibly intransitive, meaning 'to come out/to go out; to ascend; to grow' (of plants), as in Armenian, while the Gk verb ἐλάω (< Proto-Gk *ἐλά-yω) and its sigmatic aorist ἐλά-σαι are causative stems (viz. 'to make go out, to press forward, to drive'). At this point, we may assume a *Schwebeablaut* for this root (viz. PIE **h₁leh₂-* 'to go out, to grow' → **h₁léh₂-u-r* [nt.] 'vegetal growth' > Luw. **laḫḫur*), but this

would be simply *ad hoc*, since nothing would motivate this alternation.[12]

The Armenian causative stem **eluz-anem*, **eluz-i* – yet not attested in the Bible – points to **eloyz-i* 'I have extracted/made come up' (< PIE **h₁loud̑ʰ-éi̯-e/o-*)[13] from a suppletive root meaning 'to go out, to grow'), with an irregular reflex of **h₁-* as Arm. *e-* in such a context. Leaving aside the vexing issue of the fate of PIE intervocalic **-d̑ʰ-* in Armenian (there is evidence for *-z-* or *-r-*), we may at least suggest that the unexpected initial *e-* of *eluz-anem* 'to extract' (instead of ***oluz-anem*) was restored because of its suppletivism with *e*-graded *el-anem*, *el-i* 'to go out/rise' (< PIE **h₁elh₂-*). The PIE root **h₁leu̯d̑ʰ-* 'to rise; to grow' (LIV[2]: 248-249) is reflected by Ved. *ródh-a-ti* 'to grow' (with a secondary doublet *róh-a-ti* 'to ascend', treated like a palatal in fut. *rokṣyánt-*, prtcpl. *rūḍhá-*), Av. *raoδəṇti* 'they grow' and Go *liudan* 'to grow'. Ved. *vīrúdh-* [f.] 'plant' reflects the initial laryngeal (viz. PIE *°*h₁lúd̑ʰ-*).[14]

Since both roots share the same meaning, one may tentatively posit a PIE primary telic root **h₁el-* 'to go out/rise; to sprout' enlarged with different nominal morphemes: (i) PIE **h₁ól-u-*, **h₁él-u-s* [nt.] 'rising; growth' (of acrostatic inflection, thereafter AS); (ii) PIE **h₁él-h₂*, **h₁l-éh₂-s* [nt.] 'egress; the going out; vegetal growth' of proterokinetic inflection (thereafter PK),[15] which could nicely account for the *Schwebeablaut* and

[12]As duly pointed out to me by an anonymous reviewer, the root-structure **CeRH-* is canonically conducive to *Schwebeablaut*, but most of the adduced data have been drastically dispelled by Ozoliņš's (2015) dissertation.

[13]Possibly also PIE **h₁lou̯d̑ʰ-s-éi̯-e/o-* or even **h₁lou̯ǵ(ʰ)-éi̯-e/o-* (?), but Ved. *RUH-* 'to ascend' has no Iranian counterpart.

[14]That this root would not only refer to vegetal growth is shown by Hom. ἤλυθεν 'he went' (< PIE **é-h₁lud̑ʰ-e-t*), back-formed after ἐξ-ήλυθεν* 'he went out' – becoming thus a generic motion verb ('to go'), like OIr. *luid* 'he went' (< PIE **h₁lud̑ʰ-é-t*), but unlike Toch. [B]*lac*, [A]*läc* 'he went out' (< Proto-Toch. **lăcä* < PIE **h₁lud̑ʰ-é-t*), which keeps the inherited meaning. Note yet OIr. *lus* [*-u-*m.] 'herb, plant, garden herb' (< Proto-Celt. **lussu-*), reflecting PIE **h₁lud̑ʰ-tú-* (Matasović 2009: 449).

[15]Similar to the ablauting stem posited by Rieken (1999: 240) for PIE **kḗr-h₂* 'horny material; horn', gen.sg. **kŕ-éh₂-s*, whose collective stem was **kŕ-éh₂* 'skull, head' (Nussbaum 1986: 102-138) of hysterokinetic inflection (thereafter HK). The idea that the PK locative **kŕ-éh₂-i* would be reflected by Gk κραι-πάλη [f.] 'hangover' (cf. πάλλω 'to shake, *to throb', πάλσις [f.] 'pulsation') is flawed, *pace* Peeters (1980: 234) and Rieken (1999: 240), because Dor. *κρᾱ-

whose strong stem was reanalyzed as a primary verbal root (viz. PIE *h_1elh_2-) via nominal secondary derivatives reanalyzed as primary ones.[16] A similar reanalysis can possibly account for PIE *$b^{ʰ}erh_2$-/*$b^{ʰ}reh_2$- 'to quiver', ultimately from a nominal stem *$b^{ʰ}ér$-h_2, *$b^{ʰ}r$-$éh_2$- 'quick motion' built on PIE *$b^{ʰ}er$- [midd.] 'to move swiftly' (cf. Lat. *fertur*, Gk φορά). Amongst others, the root *$b^{ʰ}erh_2$-/*$b^{ʰ}reh_2$- 'to quiver' is attested by Ved. *bhuraṇ-yú-* 'quivering', YAv. *barəṇt-* 'stürmend', and Hitt. *pár-ḫa-an-d*[*a-an* [acc.sg.c.] 'galloping' (KUB 35.145 rev. 13).

The *-*u*-stem was prone to develop a verbal locution including the causative root *$d^{ʰ}eh_1$- 'to put', with the meaning of 'to make become X', such as PIE *$h_1él$-*u* $d^{ʰ}eh_1$- 'to put in state of growing, to make grow' (based on the oblique stem, that is to say the endingless locative). This verbal locution could be univerbated to form a compound: PIE *h_1l-*u*-$d^{ʰ}h_1$-*ó*- [adj.] 'going out/rising; sprouting/growing', which was the starting point for the secondary root *$h_1leu̯d^{ʰ}$- 'to go out; to rise; to grow' via a recharacterized form *h_1l-*u*-$d^{ʰ}h_1$-*ó*-*nt*- [adj.] 'the one going out; the sprouting/growing one', which was reanalyzed as a thematic aorist participle in Core Indo-European (viz. *$h_1lud^{ʰ}$-*ónt*- ⟶ durative intransitive root-present *$h_1léu̯d^{ʰ}$-*e/o*- 'to rise; to grow').[17] There was also a root-noun *$h_1lóu̯d^{ʰ}$- [f.] 'rising' (*vel sim.*) endowed with a defective adverbial locative *$h_1léu̯d^{ʰ}$-*er* 'in rising' which is indirectly reflected by its internally derived amphikinetic neuter stem *$h_1léu̯d^{ʰ}$-*ōr* 'growing beyond' surfacing as Toch. ^{A}*lyutār* [adv.] 'more' (< Proto-Toch. **lyău̯tār*) and by its external derivative *$h_1léu̯d^{ʰ}$-

πάλᾱ [f.] borrowed by Lat. *crāpula* [f.] 'hangover' makes it clear that κραι- is simply a substitute for κρᾱ-/κρη- after the pattern of καραι-βαράω (Pherecr.) vs. καρη-βαριάω (Ar.) and καρη-βαρέω (Arist.) 'to have a heavy head, to have headache' (Nussbaum 1986: 60).

[16]There was a confusion between the type *$méĝ$-h_2-*mon*- (>> Ved. *mahimán-* [m.] 'greatness'), which is a secondary derivative of PIE *$méĝ$-h_2 [PK nt.] and the primary type of Proto-Celt. **tala-mon-* [m.] 'earth' (< **tela-mon-* with Joseph's rule), reflected by OIr. *talam* [m.] 'earth, ground', which points to PIE *$télh_2$-*mon*- from *$telh_2$- 'to support' (Matasović 2009: 366).

[17]Such a verbal locution is paralleled by PIE *$h_1réu̯d^{ʰ}$-*e/o*- 'to make red' (cf. Hom. ἐρεύθω; ON *rjóða*) which has been accounted for by Sagot (2020: 408) by a phrase *$h_1ér$-*u* $d^{ʰ}eh_1$- 'to put in state of redness', ultimately based on an old acrostatic stem *$h_1ór$-*u*-, *$h_1ér$-*u*-*s* [nt.] 'redness'.

er-o- [adj.] 'raised (as free)' – source of Gk ἐλεύθερος and Lat. *līber* 'free' (Pinault 2017: 160-162).

PIE **h₁ól-u-*, **h₁él-u-s* [AS nt.] is perhaps also attested in a parallel verbal locution involving **bʰuhₓ-* 'to grow; to become; to be' (cf. Gk φυτόν [nt.] 'plant'), such as PIE **h₁él-u bʰuhₓ-* 'to grow with rising; to grow upright', univerbated in a compound **h₁l-u-bʰ(u̯)-ó-* 'who grows upright' similar to Lat. *probus* [adj.] 'upright; good, honest, excellent' (< PIE **pro-bʰ(u̯)-ó-*[18] 'who grows upright' [of a plant]). In Core-Indo-European, this compound would surface as **h₁lubʰ-ó-* [adj.] 'growing upright' reflected by its derivatives **h₁lubʰ-íh₂* [f.] 'possessing the growing upright'[19] and **h₁lubʰ-é-h₂* [coll.f.] 'vegetation', both reflected by Proto-Celt. **lubī* [f.] and **lubā* [f.] 'herb, plant' (Matasović 2009: 247). There was also an *o*-graded oxytone adjective **h₁lou̯bʰ-ó-* [adj.] 'leafy' from which originates a substantivized neuter, reflected by Proto-Gmc **lauba-* 'leaf, foliage' (cf. Go *lauf* and also *laufs* [m.], ON *lauf*, OHG *loub* 'id.'). A noun *ὄλουφος [m.] 'leaf(age); feathering, plucking' (< **h₁lóu̯bʰ-o-*)[20] is required by its denominative ὀλουφεῖν· τίλλειν (Hsch.) 'to pluck (hair, feathers)' (lit. *'to denude, to bare').[21]

This group should not be equated with the name for 'bark': Ru. *lub* [m.] 'bark, bast', Lith. *lúoba* [f.] 'bark' (*laũbti* 'to peel'), Latv. *luobs* [m.] 'bark' (*luôbt* 'to peel'), ON *laupr* [m.] 'cork', Bavar. *lauf* [m.] 'peel; shell', OHG *louft* [-*a-* or -*i*-m.] 'bark, bast, cork' (gl. *avella, avellana, liber, suber*), Alb. *labë* [f.] 'bark of tree' (< Proto-Alb. **laub-ā*). These forms are better accounted for by PIE **leh₂-u-bʰó-* [adj.] 'peeled' (of bark or cork),[22] built on the verbal abstract **léh₂-u-* [nt.] 'cutting (stones); *cleaving (?)' reconstructed by Nikolaev (2010: 202).

[18]With the rule **bʰu̯V* > **bʰV* posited by Pinault (2022: 236).
[19]For the possessive feminine suffix **-ih₂*, see Pinault (2014).
[20]With the same contextual reflex of laryngeal **h₁-* on *o* graded nouns by Gk ὀ- as Gk ὄροφος [m.] 'roof' vs. ἐρέφω 'to cover (with a roof)', ὄροβος [m.] 'chick pea' vs. ἐρέβινθος 'id.'
[21]If not a stemming for *ἀπ-ολουφέω 'to remove the leaves, to denude, to bare'), this verb could be accounted for as a privative denominative *per se*, cf. E. *to skin* (= 'to remove the skin'), G. *köpfen* 'to behead' by contrast with prepositional denominatives (cf. G. *ent-laub-en* 'to remove the leaves').
[22]With a derived meaning of the PIE suffix **-bʰó-* (viz. 'who becomes X; who is X-ed'), as per Pinault (2022: 239).

One must therefore consider the possibility that Proto-Sl. **lùbъ* [-*o*-m.] 'bark' with acute intonation[23] was reshaped as **lûbъ* (Ru. *lub* [m.] 'bark, cork') after Proto-Sl. **lûpъ* [-*o*-m.] 'peel' which is the regular postverbal substantive of Proto-Sl. **lūpìti* 'to peel, to bark, to plunder' (< **lou̯p-éi̯-e/o-*), cognate of Lith. *laupýti* 'to tear off' (cf. Latv. *làupît* 'to plunder, to despoil'). In Lithuanian, this root is reflected by other present-stems: *laũpti* (*laupiù*) 'to peel, to shell, to hull' and *lùpti* 'to peel, to bark' (cf. Latv. *lupt* 'to peel, to denude, to bare'). Lith. *laũbti* (*laubiù*) 'to peel'[24] with *métatonie douce* does not match with Latv. *luôbt* 'to peel' with broken tone: one would rather expect Lith. **láubti* with acute tone, reflecting the laryngeal.[25] In fact, both roots have been converging: Lith. **láub-ti* vs. *laupýti* → *laũbti* (*laubiù*) 'to peel' vs. *laũpti* (*laupiù*) 'to peel'.[26] Incidentally, it should be mentioned that Lith. *laub-ẽnė* [f.] 'Malaxis monophyllos' (G. *Weichkraut*; E. [colloquial] *white adder's mouth*) – a terrestrial one-leafed white orchid – does not belong here, but rather points to a base-stem **laũbas* [m.] 'leaf' (< PIE **h₁lóu̯bʰ-o-*).

Turning back to Germanic, we may reasonably assume Proto-Gmc 2-**lauba-* [m./nt.] 'bark, cork' originating from an adjective 2-**lauba-* (< PIE **leh₂-u-bʰó-* [adj.] 'peeled; stripped off' [of bark]). A weak verb **laub-jan-* 'to strip the bark from a tree, to peel' could nicely account for the action noun **lauf-ti-* 'action of stripping the bark/cork from a tree' (concretized in OHG *louft* [m.] 'bark, bast, cork'). There was also a stem **laupa-* [m.] 'cork' (ON *laupr*), surely from earlier **lauppa-* with degemination of the super heavy syllable **-aupp-* triggered by

[23]Such as Proto-Sl. **kùpъ* [-*o*-m.] 'heap' from PIE **keh₂-u-po-* as per Derksen (2008: 256; 2015: 233).

[24]After which was made Lith. *lubà* [f.] 'plank, board (forming the room ceiling)', endowed with a collective plural *lùbos* 'room ceiling' (G. *Zimmerdecke*). OPrus. *lubbo* [f.] 'bast, plank' (whose intonation is unknown) and Latv. *luba* [f.] 'ring, bark' (but pl. *lubas* 'wood shakes') point to a more archaic meaning (vz. 'ring, bark, bast').

[25]See for instance Lith. *káupa* [f.] 'heap' from PIE **keh₂-u-p-* (Derksen 2015: 233).

[26]*Pace* Smoczyński (2007: 844, s.v. *laũbti*), who states that "*laub-* is probably a variant of *laup-*" (prawdopodobnie *laub-* jest tu wariantem do *laup-*), both forms are not variants, but rather point to mutual influence.

the so-called "Kluge's law" [27] (viz. Proto-Gmc **lauppa-* < Post-IE **láu̯bʰ-no-*).[28] Lastly, mention should be made of Proto-Gmc **luf-tu-* [m.] 'roof; air, sky'.[29] According to Kroonen (2013: 342), "the original meaning was 'roof', which in view of the etymological link with Ru. *lub* 'bast', OPrus. *lubbo* 'bast, plank', may have been fashioned from patches of bark in Proto-Germanic times."[30]

Lat. *lĭbĕr*, *lĭbrī* [m.] 'the inner bark or rind of a tree' (archaic *lĕbĕr* at Quint. 1.4.17) > Rum. *lăor/lior* [m.] 'bast' does not belong here. This noun may rather originate from Proto-It. **lep-ro-* [adj.] 'peeled', base-stem of a denominative verb **lep-rā-* 'to remove the bark from a tree' – with dialectal lenition of **-pr-* to *-br-* (cf. U. **subra** 'supra; **kabru** 'caprum; O. **embratur** < Lat. *imperātor*) and dialectal raising of **ĕ* to *ĭ* (cf. Lat. *fĭrmus* < PIE **dʰer-mó-* [adj.] 'firm, solid'; Lat. *fĭbĕr* [m.] 'beaver' < PIE **bʰe-bʰru-*). Lat. **dē-lĕbrāre/dē-lĭbrāre* [Col.] 'to peel, to bark' is the starting point of a back-formation *lĕbĕr/lĭbĕr*. *Pace* de Vaan (2008: 337), the PIE etymon †*lubʰ-ro-* [m.] 'leaf; rind' may be dispensed with.

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[27] The so-called Kluge's Law (Kroonen 2011: 41-53) makes unnecessary to assume PIE **-b-* to account for Proto-Gmc **-p-* at the end of a root: according to this law, PIE **-p-n-* or **-bʰ-n-* would surface as Proto-Gmc **-pp-*, just like PIE **-t-n-*, **-d-n-* or **-dʰ-n-* would surface as Proto-Gmc **-tt-* and PIE **-ḱ̑-n-*, **-ǵ̑-n-* or **-ǵ̑ʰ-n-* as Proto-Gmc **-kk-*.

[28] For the *Wortbildung*, one may compare Proto-Gmc **haupa-* [m.] 'pile, heap' (viz. formerly **hauppa-* with degemination), reflecting Post-IE **káu̯p-no-* (< PIE **kéh₂-u-p-*), related to Lith. *káupa* [f.] 'heap', whose acute intonation points to **keh₂-u-p-* (Derksen 2015: 233), with a Zero-graded by-form *kūpà* [f.] 'pile, bunch' (< PIE **kuh₂-p*).

[29] Perhaps from a zero-graded present **lub-jan-* 'to strip the bark from a tree, to peel' (cf. Proto-Gmc **klub-jan-* 'to cleave' vs. **klaub-jan-* 'id.'). Same pattern as Go *þuhtus** [m.] 'conscience' (Gk συνείδησις) vs. *þugkjan* 'to believe; to have an opinion'.

[30] In spite of appearances, one must keep separated from this very consistent group Proto-Gmc **laub-jō*^{n} [weak f.] 'shelter', reflected by OHG *louba* [f.] '*habitaculum ex ramis factum*', G. *Laube* [f.] 'pergola' and OFr. *loge* [f.] 'temporary shelter made of leafy branches' (< Old Low Franconian **laubja*). It is indeed a secondary derivative of **lauba-* [nt./m.] 'leaf, foliage' → **laub-jō*^{n} [f.] 'shelter made of leafy branches'. I do not consider it might have ever been some sort of derivative of appurtenance (*pace* EWAhd V: 1457), but a secondary derivative of technical meaning similar to Go *tainjo** [f.] '(large) basket' (κόφινος) from Go *tains* [*-a*-m.] 'twig' (Casaretto 2004: 261).

2.4 Derivational history of Luw. **laḫḫur*

From the oblique stem of PIE **h₁él-h₂*, **h₁l-éh₂-s* 'vegetal growth' [PK] was derived **h₁l-éh₂-u-* [adj.] 'leafy' → **h₁l-éh₂-u-* [nt.] 'leaf', recharacterized as **h₁l-éh₂-u-r* [nt.] 'leaf'[31] > PA **láH-ur* (not PA ***lā́war* < PIE **-éh₂-u̯-r̥*). The initial laryngeal **h₁-* is dropped in Hittite (Melchert 1994: 65-68), as is clear from Hitt. *ling-* 'to swear' (< PIE **h₁lénĝʰ-*) vs. Gk ἐλέγχω 'to cross-examine; bring to proof; accuse; question'. We may reasonably assume the same for Luwian[32] and Anatolian itself.

2.5 Proto-Gk **ἐλαίϝᾱ* [f.] 'olive tree'

In the following Section, a new analysis is proposed for Proto-Gk **ἐλαίϝᾱ* [f.] 'olive tree', which I hold for a cognate of Luw. **laḫḫur* 'leaf; leafy plant' (< PIE **h₁l-éh₂-u-r*), via a parallel derivational pattern: PIE **h₁l-eh₂-i̯u̯-ó-* [adj.] 'leafy' (thematic variant of **h₁l-eh₂-i̯ú-*), surfacing as Proto-Gk **ἐλαιϝός* [adj.] 'leafy' → **ἔλαιϝος* [m.] 'wild olive tree'/**ἐλαίϝᾱ* [f.] 'olive tree'). Thereafter the Greek data and their cultural context will be reassessed (§2.5.1), then the oft-mentioned "connection" with Arm. *ewł*, gen. *iwłoy* 'oil, butter, unguent' shall be revisited (§2.5.2), before dealing with the complex derivational history of

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[31] The same *Wortbildung* is seen in Gk ἄγκῡρα [f.] 'anchor' (< Proto-Gk **ἄγκῠρ-yα* 'possessing a curve'), from PIE **h₂énk-u-* [adj.] 'bent' → **h₂énk-u-* [nt.] 'curve' → **h₂énk-u-r* [nt.] 'id.' An action noun **h₂énk-u̯-r̥* [nt.] 'action of bending' would surely surface as Proto-Gk **ἄγκʷ-αρ*, which, endowed with a possessive femine suffix **ἄγκʷ-αρ-yα*, would surface as First Millenium Gk ***ἄμπαιρα*. Likewise, Toch. ^{B}*śātre* 'grain' represents a secondary thematization of Proto-Toch. **śātär* (< PIE **gʷi̯éh₃-tu-r* with *Neutralemotion* from **gʷi̯éh₃-tu-* [m.] 'means of living'), viz. Proto-Toch. **śātär-æ* > Toch. ^{B}*śātre* (Pinault 2020: 383).

[32] *Pace* Kloekhorst (2006: 95-96), initial **h₁-* before resonant is not preserved in Luwian. This claim relies on two flawed points: (i) the interpretation of HLuw. *á-ma/i-* /ámmi-/ 'mine' from PIE †*h₁mó-* (rather from PIE **h₁é=mo-* > PA **ʔámmo-* > Luw. **amma/i-*, vs. PIE enclitic **=mo-*), and (ii) the initial laryngeal **h₁-* in the Luwian word for 'name'. As I have recently suggested (Garnier 2021b: 158), one has to assume Proto-Luw. **an-man-* (with a syllabic resonant) reshaped as **an-amman-* after the productive class of *-amman-* neuter stems. As a result, one cannot directly compare Hitt. *lāman-* [nt.] 'name' (from PA **nṓ-man-*) and Luw. **alamman* (dissimilated form of **an-amman*), which does not reflect PA †*ʔnŏman*. The reconstruction of PA †*(ʔ)lŏman* [written **(h₁)lŏmn̥*] is flawed too (*pace* Sasseville, eDiAna, *s.v.* PA **(h₁)lŏmn̥/*(h₁)l̥mEn*).

Proto-Gk *ἐλαίϝᾱ (§2.5.3), including a thorough morphological and phonological discussion of the derivational sketch outlined above.

2.5.1 The Greek data and their cultural context

Alongside Proto-Gk *ἐλαίϝᾱ [f.] 'olive tree' (Hom. ἐλαίη), there was also a doublet *ἔλαιϝος [m.] 'wild olive tree' reflected by ἔλαιος (Pind.; Soph.); Cypr. ἔλαιϝον [nt.] 'olive oil' (Hom. ἔλαιον) shows the expected digamma (Beekes 2010: 400). Interestingly, the meaning 'olives' does not appear before Aristophanes: κάδους…ἐλαᾶν 'jars of olives' (*Ach.* 549-550). This use of the plural to denote the fruits is totally unparalleled in Greek (cf. ἄπιον [nt.] 'pear' vs. ἄπιος [f.] 'pear tree'). It is very likely to have appeared in a situation of non-élite bilingualism, namely the variety of Greek possibly spoken in Cyprus by Phoenicians. It is common knowledge that the plural of the name for 'olive tree' means 'olives' in Semitic.[33] Accordingly, we may assume that Cypr. *ἔλαιϝαι [f.pl.] 'olives' is a calque of Phoen. *zytym** 'olives', with Phoen. ***kd zytym*** 'jar(s) of olives' inferable from Ug. *w ṯṯ kd ztm* /wa ṯiṯu kaddū zêtīma/ (Yon & Arnaud 2001 37.5) "and six jars of olives". That the head of the genitive in κάδους…ἐλαᾶν 'jars of olives' is a well-known Semitic loanword (Gk κάδος is from Phoen. *kd* /kadd/) may not be due to chance.

In Homer, the contextual evidence of ἔλαιον mostly refers to anointment for cosmetics or baths, with the clausula λίπ' ἐλαίῳ# 'anointing generously (λίπα [adv.] 'in a fat way') with olive oil', preceded by verbs like ἀλείψασθαι (K 577) or χρίσασθαι (ζ 96) 'to anoint oneself with a great deal of oil'. This oil can receive an epithet: #ἀμβροσίῳ (Ξ 171); #ἀμβρότῳ (θ 365 [viz. a metrical substitute for ἀμβροσίῳ]), which one may reasonably not translate by 'immortal', but "ambrosial" – that is

[33]See for instance Ug. *zt* /zêtu/ (< Proto-Sem. **zaytu*) 'olive tree; [coll.] grove of olive trees'; gen.pl. *ztm* /zêtīma/ 'olives'; Hebr. *zayiṯ* (< Proto-Sem. **zaytu*) 'olive tree'; pl. *zêṯîm* 'olives'; construct state *zêṯ šemen* 'olive oil' and Ar. *zaytu* 'olive oil' (endowed with an innovative broken plural *zuyūtu* 'oils'); pl. *zaytūna* 'olives' – after which has been most remarkably coined a secondary derivative: Ar. *zaytūnatu* [f.] 'olive tree'.

to say 'perfumed with ambrosia; smelling like ambrosia; sweet-smelling, fragrant'.[34]

According to Onians (1988: 299), "ambrosia is the oily or greasy and nectar the watery liquid of life". It is noteworthy that in the Iliad, when Hera plans to beauteously adorn herself in order to seduce Zeus, first she cleanses her skin with ambrosia, then she rubs her immaculate body with perfumed "ambrosial" oil:

> ἀμβροσίῃ μὲν πρῶτον ἀπὸ χροὸς ἱμερόεντος
> λύματα πάντα κάθηρεν, ἀλείψατο δὲ λίπ' ἐλαίῳ
> ἀμβροσίῳ ἑδανῷ, τό ῥά οἱ τεθυωμένον ἦεν. (Ξ 170-172)
> "With ambrosia first she cleansed from her lovely body
> every stain, and anointed her richly with oil,
> ambrosial, soft, and of rich fragrance (τεθυωμένον)."

Unfortunately, from Homer onwards, the secret of the preparation of ambrosia is unknown to humans, but, as per Grand-Clément (2018), it can refer to: (i) solid food, that Greek gods eat in order to remain immortal; (ii) a kind of cosmetic lotion, which maintains the beauty (χάρις) of Hera and Athena which they can anoint themselves with to whiten their skin or even bathe in; (iii) a medicinal unguent with strong preservative properties, used by Thetis so that the flesh of killed Patroclus might be sound continually (ἵνα οἱ χρὼς ἔμπεδος εἴη# Υ 39). Perhaps one can definitely not eat anti-aging creams, but the three recorded Homeric meanings of ambrosia might very well point to royal jelly as being a consumable.

Hera is a queen: within the realm of nature, the paragon of female kingship is embodied by the figure of the queen bee.[35]

[34]It can be notably used as an epithet of gods' hair: #ἀμβρόσιαι…χαῖται (A 529) 'the perfumed hair' (of Zeus) or gods' precious clothes: ἀμβρόσιον ἑανὸν ἕσαθ' (Ξ 178) "(Hera) clothed her about with an ambrosial robe". That the use of perfuming royal woolen clothes is attested in Mycenaean times (Palmer 1963: 169).

[35]In contrast to their attendants, royal larvae and adult queen bees are fed large quantities of royal jelly (within their cells, the royal larvae are actually bathing in it). Young larvae of the honey bee (Apis mellifera) are totipotent: they can become either queens (via the absorption of royal jelly) or workers (which are sterile). Even if two larvae share identical DNA, one raised to be a

Hera is notorious for begetting many gods, which is reminiscent of the queen bee's prolificacy. Furthermore, the royal jelly makes the queen a queen, just like the ambrosia maintains the immortality of Greek gods. Last but not least, unlike honey, this viscous and greasy secretion of bees contains animal proteins, which confers to the royal jelly a strong antioxidant potential. Furthermore, royal jelly has been used in traditional medicine since ancient times. Before she became a jealous vengeful wife, the great goddess Hera was the Minoan *Potnija* – daughter of the Great Mother (Gk Gaia) – and was referred to as the "Pure Mother Bee" (Elderkin 1939). The ancient representation of Hera as a queen bee is blurred because of syncretic bovine features (βοῶπις [f.adj.] 'ox-eyed') as Zeus' wife, since the dynastic figure of the Olympian Zeus is clearly associated with the bull – like his monster-killing Semitic counterpart, Baʿal, who is also a thundering bull-god.

Turning back to Hom. ἔλαιον, it is obvious that, in the Homeric world, the oil made from olives was more prestigious and more important than the olives,[36] since olive oil was used to produce both medicine and cosmetics, whereas whole olives were used only for food. Within the Mediterranean world, oil is associated with kingship, with the anointment of kings in Israel, where the olive groves and warehouses were protected by King David's guards. "Ancient peoples used olive oil not just for consumption and cooking, but also as perfume, anointment for the dead, soap, and lights." (Clodoveo et al. 2014).[37] There is

worker, the other a queen, the two adults would be strongly differentiated across a wide range of characteristics including anatomical and physiological differences, longevity, and reproductive capacity (Shi et al. 2011).

[36]The olive oil is blessed or holy, and often related to divinity. In the Koran, mention is made of a mythical olive tree, whose oil is used for lighting the cosmic lamp: 24.35 (*Sūratu-n-Nūr* 'Chapter on Light'), *yūqadu min šajaratin mubārakatin zaytūnatin* "(the Lamp, viz. Allah) is fueled (*WQD-*) by (the oil) of a blessed tree, an olive tree" (lit. *'from a blessed tree'). The ancient Egyptians would ritually offer olive oil to their gods and crown their dead with olive branches (Torrecilla 2010: 4).

[37]According to Torrecilla (2010: 4), "for thousands of years, the Mediterranean peoples have considered olive oil as sacred. Its inhabitants considered that olive oil was more than mere food, having medicinal and magical properties, an endless source of fascination and wonder and the fountain of great wealth and power."

an association between Hom. ἔλαιον ἀμβρόσιον and the Hom. ἀμβροσίη: both are used by gods (especially goddesses) and this is in fact a merism, combining olive oil and honey, like in *Deuteronomy* 8.8 אֶרֶץ זֵית שֶׁמֶן, וּדְבָשׁ "a land of olive oil and honey". Interestingly, the same Semitic merism OIL + HONEY meaning 'fertility' is already attested in Ugaritic poetry:[38]

šmm šmn tmṭrn /šamūma šamna tamṭurūna/
nḫlm tlk nbtm /naḫlūma talikū nubtam/
"The heavens (*šmm*) shall rain (down) oil (*šmn*)"
"May the torrents (*nḫlm*) flow with honey (*nbtm*)"
(KTU[1] 6 iii 6-7; 12-13)

Within the Greek world, everything started from Crete, where the first wild olive tree (*oleaster*) would grow ca. six millennia ago (fossil leaves were found on the nearby Island of Santorini). The olive tree is one of the world's oldest cultivated trees (Kapellakis et al. 2008: 1). According to Torrecilla (2010: 8), "from Crete, olive oil, cultivation and production techniques were exported to the Greek peninsula…mainly by Athenian ships". Those ancient commercial roads, and the prominent trade of olive oil and olive trees in Attic are echoed by the mythical foundation of Athens by Athena, who caused the first ever olive tree to grow with her spear, becoming thus the patron of Attica, and making the olive tree autochthonous.

In Mycenaean, like in Homer, the word for 'olive' is not recorded: there is *e-ra$_3$-wo* /ἔλαιϝον/ [nt.] 'olive oil' (perfumed with sage in PY Fr. 1217.1, *e-ra$_3$-wo pa-ko-we* [nom.sg.] /ἔλαιϝον *σφακό-ϝεν/). There are graphic variants: Myc. *e-ra-wo* (PY Fr. 1223.1, *e-ra-wo pa-ko-we*), with *notation suffisante* with 𐀲 ‹ra› vs. *notation fine* with 𐀳 ‹ra$_3$›, whose shape was more complex (Aurra Jorro 1999: I; 237).

[38]Ug. *tmṭrn* /ta-mṭúr-ūna/ is from *MṬR-* 'to rain' (3.pl.m. *yaqtúlu*, viz. prefixed imperfect, expressing here the future). Ug. *tlk* /tálikū/ belongs to *HLK-* 'to go, to run, to flow' (3.pl.m. *yáqtul*, viz. jussive, with regular deletion of *H-* before prefix). Ug. *nbtm* is an adverbial accusative with the ancient mimation, cf. Ug. *dmm* /damam/ 'with blood', Hebr. *yômām* [adv.] 'by day' (< Proto-Sem. **yaum-a-m*). To highlight the merism, there is a stylistic dislocation between the two kola: (i) variation in the position of verbs; (ii) different verbal stems are used; (iii) there is a contrast in agreement between 'to rain' governing an internal accusative and 'to flow' associated to an adverbial accusative.

A feminine -*ā*-stem – written with the same *notation suffisante* (viz. *e-ra-wa*[) – is recorded in KN F 841.6 (preceded by]*wa* OLIV 46). Accordingly, it must be parsed as a plural nominative */ἔλαιϝαι/ 'olive trees', because 46 olives in such a list would hardly make any sense. So *e-ra$_3$-wo* /ἔλαιϝον/ [nt.] 'olive oil' and */ἐλαίϝᾱ/ [f.] 'olive tree' are the only forms that exist in Mycenaean. Mycenologists and Hellenists are quite prone to assign those words to some "Ægean" substratum (Bartoněk 2003: 490) or to "Pre-Greek" (Beekes 2010: 400-401), whatsoever this appellation might be (I dare not say language). What Bartoněk had in mind was to compare "Ægean" words individually borrowed by Greek and Latin, with Mycenaean evidence as a terminus a quo, like the name for 'mint' (Myc. *mi-ta* */μίνθᾱ/), attested in First Millennium Greek (Ion.-Att. μίνθη) and Lat. *menta* (**mentha* as *var. lect.* in Ovid, *M.* 10.729). The case of 'olive tree' and 'olive oil' significantly differs from this vexing triade: indeed, Latin proves to be a Post-Mycenaean borrower of Gk *ἐλαίϝᾱ (cf. Lat. *olīva* [f.] 'olive tree; olive') and ἔλαιϝον (cf. Lat. *ŏlĕum* [nt.] 'olive oil') – both surely stemming from Doric of Magna Graecia – as it shares with First Millennium Greek the peculiar use of the plural *olīuae* meaning 'olives'.[39]

According to Fenestella (at Pliny the Elder, Historia Naturalis [HN] 15.1), "in 581 BC, during the reign of Tarquinius Priscus, (the olive tree) was not found at all in Italy" (*oleam…Fenestella vero omnino non fuisse in Italia…Prisco regnante, ab annis populi Romani CLXXIII*). It seems that the Romans discovered olive trees through their contacts with Greek colonies in Italy (Kapellakis et al. 2008: 2). The South of Italy (Tarentum, Heraclea, Thurii and Croton) was conquered at the end of the Pyrrhic war (viz. 275 BC), even if the Roman hegemony started earlier, with the third Samnite war (298-290 BC), when Rome really started to push southward. Yet, in the Italic peninsula, Doric was mainly spoken from Tarentum to Callipolis (in the very south of Apulia). During those dramatic moments of the Roman Republic, Dor. *ἔλαιϝον [nt.] 'olive oil'

[39]By contrast with Lat. *capparim* [acc.f.sg.] 'capers' (with collective meaning), the plural is mandatory for 'olives' at Plautus, *Curc.* 90, *Voltisne olīvās…aut capparim?* "Do you want olives or capers?"

would have been borrowed as **olaivom* with velar *ł* due to following *a* and subsequent rounding of *e* to *o*, surfacing later on as **oleivom* with vocalic reduction – a well-known phenomenon that allegedly occurred ca. 300 BC according to Nishimura (2010: 251) – which is necessarily posterior to the velarization. Then, during the third century BC, the form would evolve as **oleiom* with regular deletion of *w* before *o* – whence appeared a "new" intervocalic *y* which ultimately disappeared,[40] producing Lat. *olĕum*, by contrast with *olīva* [f.] 'olive tree' < **oleiva* < **olaiva*[41] borrowed from Dor. *ἐλαίϝᾱ.

2.5.2 Arm. *ewł*, gen. *iwłoy* 'oil, butter, unguent'

Hübschmann (1897: 394) states that, by contrast with Greek, where there are designations for 'olive', 'olive tree' and 'oil', the name for 'oil' (Arm. *ewł*, gen. *iwłoy*) is totally isolated within the Armenian lexicon. In Greek, 'olive oil' (ἔλαιϝον) became a generic designation for 'oil' (like in Latin and the other European languages: Fr. *huile*, E *oil*, G. *Öl* and so on). Ancient Greeks belonged to the Cretan civilization sphere, where olive oil was fundamental. Furthermore, the Greek name for 'olive oil' is perfectly motivated: it is a trivial conversion to neuter based on the name of the tree. Unlike Gk ἄπιον [nt.] 'pear' vs. ἄπιος [f.] 'pear tree', it does not refer to the fruit, but to the oil made from it, because oil was the most valuable product in the cultivation of olive groves (whereas pears are the unique edible product derived from a pear tree). The Armenians developed in a very different environmental context: in the Caucasus, the only fatty material available is animal fat (viz. tallow, grease or butter). The PIE lexicon also implies a civilization based on animal fat: the PIE roots **selp-* 'to anoint' and **smer-* 'to smear' give many designations for 'animal fat'

[40]Surely from the genitive singular *olĕī* (the intervocalic *y* was reanalysed as a glide), which was paradigmatic: from the regular gen.sg. *olīvī* (< **olaivī*) was back-formed a nom./acc. *olīvom* (Plaut.), post-classic prose *olīvum* [nt.] 'oil'. On the contrary, the regular *olīva* 'olive tree' appears as *oleă* in Pliny the Elder (secondary derivative *oleāster* [m.] 'wild olive tree').

[41]The initial stress was kept from the Greek donor form (Dor. *ἔλαιϝαι [f.pl.] 'olives'), triggering vocalic reduction. The same feature is seen in Lat. *ancŏra* [f.] 'anchor' < **ancŭra* (< Dor. *ἄγκῡρα [f.] 'anchor') with shortening. In genuine Latin words, the stress would have been captured by the penultimate long vowel (viz. Lat. ***ancūra*).

(viz. 'grease; butter; tallow; marrow; kidney fat'). Incidentally, Arm. *ewł* means not only 'oil', but also 'butter' (Gk βούτυρον) or 'unguent' (Gk μύρον).

Nevertheless, even if comparing Arm. *ewł* with Gk ἔλαιϝον requires titanic efforts, it is partially agreed that both forms may be related one with each other, being borrowed at some early stage from an unspecified Mediterranean donor language – as accepted by Martirosyan (2010: 272), who states: "On the whole, the Mediterranean origin…seems more plausible, although the details remain unclear."

Ačaŕyan (1937: 3) considers the Armenian and the Greek words as borrowed from Phrygian or from the "Aegean" civilization. Beekes (2003: 205) rather states that Arm. *ewł* is directly borrowed from Gk. ἔλαιον – without further notice.[42] Interestingly, the Armenian word for 'olive oil' is *zēt'* which is clearly borrowed from Syriac *zayt-ā* (absolute and construct state *zēṯ*), and after which was coined Arm. *jit'-eni* 'olive tree' (Hübschmann 1897: 309). Note that Ar. *zaytu* 'olive oil' is also borrowed from Syriac.

Shifting away from the Greek word, Matzinger (2006) adopts a QIE etymon **se/oi̯b-lo-* 'grease; oil' based on a root **se̯i̯b-* 'to pour; to rain; to drip; to drizzle; to sift' (LIV^2: 521), reflected by Toch. ^{A}*sip^{ā}-* 'to anoint', ^{A}*sepal* 'grease; salve, unguent'[43] (Malzahn 2010: 947). An etymology involving a verbal root 'to anoint, to grease' seems very likely, but the fate of PIE intervocalic **-bl-* in Armenian is unknown (all the more

[42]Beekes (2003: 205) notes that final *-eł* or *-ił* sporadically develop a *w*-epenthesis (viz. *-ewł* or *-iwł*), yet this development was late, as forms without *w* are still met with (see for instance the doublets *šił/šiwł* 'branch, stalk'), but – as duly pointed out by Clackson (2005: 157) – this cannot work for *ewł* since the inflection *eł, eł-u* 'oil' is clearly secondary: the only occurrence of *eł-u* is in Deuteronomy 8.8, where it assonates with *meł-u* 'of honey'. As convincingly proposed by Martirosyan (2010: 271), this secondary *u*-flection may have arisen from the aforementioned biblical merism "a land of olive oil and honey" (Arm. *erkir jit'eneac' eł-u ew meł-u*). Note the periphrastic expression *jit'eneac' eł** (lit. *'oil of olive trees') to express 'olive oil'.

[43]Toch. ^{A}*sepal* 'grease, fat' is a substantivized gerund = ^{B}**saipālle* 'suitable for anointing' (cf. B *śwālle* 'suitable for eating') – not 'anointable'. Used at the instrumental (*sepal-yo*) in the locution *sepalyo talke yasi* (= *yatsi*) 'to perform a sacrifice with grease' (A355e4). See also *(ṣä)lypä sepalyo* (177a3) "with oil [and] fat". This fatty material is animal fat: *sepal mäśśuntaṣṣ aci* (A177a1) 'unguentum e medella' (Poucha 1955: 379).

so as this cluster would form a morpheme boundary). Martirosyan (2010: 272) reasonably adopts a by-form **seu̯ip-* of the root, reflected by nominal evidence gathered by Pokorny (IEW I: 894).

In fact, the underlying PIE root – wrongly reconstructed as PIE **seu̯ib-* 'to make flow' (LIV^2: 521) – must be rewritten as **seu̯ip-* 'to be moist/slimy; to drip; to anoint'. The awkward auslauting **-b-* may be easily dispensed with, as Hom. εἴβω 'to pour, to shed (tears)' – allegedly stemming from a root present **séu̯ib-e/o-* with psilosis – has nothing to do here: the starting point is a reduplicated aorist **u̯e-u̯g$^{\text{u̯}}$-ónt-* 'pouring'[44] regularly surfacing as Proto-Gk **ϝειγ$^{\text{w}}$-όντ-* (cf. Hom. **ϝειπ-ών* < Proto-Gk **ϝεικ$^{\text{w}}$-όντ-* < PIE **u̯e-u̯k$^{\text{u̯}}$-ónt-*), whence Hom. **ϝειβ-ών* crossed with an inherited action noun **λοι-μή* [f.] 'action of pouring (libations)' (< PIE **loi̯(hₓ)-méh₂,* viz. **loi̯(h₃)-méh₂*).[45] Hom. λείβω 'to shed (tears); to pour forth (wine) in way of libation' may be accounted for by an analogy **λοιμή* : **εἰβ-* : : λοιβή : λείβω. Both εἴβω and λείβω are root presents, and function as metrical doublets: κατὰ δάκρυον εἴβεις# (Π 11) vs. δάκρυα λεῖβον# (N 88). At its face value, OE *sāpe* [wk.f.] 'salve; unguent' (< Proto-Gmc **saip-ō̄^{n}*) requires a PIE root **seu̯ib-*, but we may rather assume PIE **seu̯ip-néh₂* [f.] 'anointment' first surfacing as Proto-Gmc **saipp-ō̄^{n}* 'salve; soap'[46] with the so-called Kluge's law (viz. PIE **-p-n-* > Proto-Gmc **-pp-*), then to **saip-ō̄^{n}* with regular degemination of the super heavy syllable (cf. Kroonen 2011: 41-53). That the PIE root had a voiceless labial is supported by OHG *seibar* [m.] 'slime, drool' (G [dial] *Seiber* 'saliva running out of the mouth'), reflecting Proto-Gmc **saiƀ-ra-* [m.], from PIE **seu̯ip-ró-* [adj.] 'dripping', showing the unmistakable effect of Verner's law (PIE **-p-V́* is lenited as

[44]Cf. Gk ὑγ-ρός [adj.] 'humid' (< PIE **ug$^{\text{u}}$-ró-*) vs. *o*-graded Proto-Gmc **wak$^{\text{w}}$a-* [adj.] 'humid' (Heidermanns 1993: 646).

[45]Ultimately from a primary root **leh₃-* 'to pour', endowed with an *-i-*present (viz. **lóh₃-i-*), whose zero graded *-tó-*adjective **lh₃-i-tó-* 'poured' was prone to metathesis (viz. **lih₃-tó-*), producing a "new" root **leu̯ih₃-* (Garnier & Sagot 2019: 35).

[46]For the alternative scenario of a substrate word related to Lat. *sāpō* [m.] 'soap', see Simon (2020). An anonymous reviewer mentioned to me the Finnish loan *saippua* 'soap', which requires a doublet **saip-wō̄^{n}* vs. Proto-Germ. **saip-ō̄^{n}*.

Proto-Gmc *-*ƀ*-, by contrast with PIE *-*V́-p*- surfacing as *-*f*-). We may also add Lat. *sēbum* [nt.] 'tallow; grease' (cf. *sēbōsus* [adj.] 'greasy; fatty' and *'chubby' when used as a cognomen), which is likely to have been borrowed from a rustic dialect, with monophthongization of Proto-It. **seipo*- as **sḗpo*-, followed by a sporadic lenition triggered by the preceding long vowel (cf. Lat. *sībus* [adj.] 'clever' from O. *sipus* /'si:.pus/ < Proto-It. **sēp*- [perfect-stem] 'to know; to be wise/clever' – data *apud* de Vaan 2008: 561). This may reasonably point to PIE **seiH̯p-ó*- [adj.] 'fat, greasy'. Interestingly, Arm. *hiwt'* (*-o*-; *-i*-) 'moisture, sap' reflects PIE **sip-tó*- as per Olsen (1999: 52 with **sip-tó*- from **sib-tó*-) and Martirosyan (2010: 409).

Turning back to Armenian, it is not absolutely sure whether **se/oiH̯p-lo*- would surface as Arm. *ewł*, since the fate of PIE intervocalic *-*pl*- is only documented by Olsen's (1999: 102) not uncontroversial reconstruction of *erkiwł* 'fear' as **duH̯éi̯-plo*- [m.] 'doubt' (cf. OHG *zwīfal*, G *Zweifel*), which is deemed attractive by Martirosyan (2010: 267). Admittedly, Fr. *redouter* 'to fear' is related to *doute* [m.] 'doubt', but it would be most surprising that a Germanic innovation based on PIE **duH̯i-pl-ó*- 'twofold; double' may be echoed by Arm. *erkiwł* (*-i*-) 'fear' (also *erkewł*), which is the verbal noun of *erki*- 'to fear'.[47]

As a result, we may posit PIE **soiH̯p-í*- [f.] 'anointment' → **soiH̯pi-ló*- [adj.] 'suitable for anointing' → **sóiH̯pi-lo*- [m.] 'fatty material' > Proto-Arm. **éwił*, gen. **iwiłóy* > Arm. *ewł*, gen. *iwłoy*.

2.5.3 Derivational history of Proto-Gk *ἐλαίϝᾱ

The term 'olive oil' originated from the name of the olive tree and, as said, in Greek, 'olive oil' became a generic word for 'oil'. This situation is not due to areal influences, since it is unparalleled both in Semitic and in Anatolian: (i) in Semitic, the generic name for oil is Proto-Sem. **šamnu*- 'oil', not related to 'olive'; (ii) in Anatolian, the only inherited word for 'oil' is PA **sóĝ-en*- [nt.] reflected by Hitt. *šākan* [nt.] 'oil; fat' and CLuw.

[47]I would tentatively suggest a PIE etymon **duH̯éi̯-u̯-r̥* [nt.] 'action of fearing' > **dwéi-war* > **ðgʷḗ-war* > **rkéwar* > **erkéwar* > **erkewr*/**erkiwr* > *erkewł/erkiwł* since the usual dissimilation of **r—r* as *ł —r* was hampered by the root *erki*- 'to fear'.

tāin- [nt.] 'oil' (Kloekhorst 2008: 688). After CLuw. *tāin-* 'oil' was coined **tāin-iya-* [adj.] 'of oil', reflected by the Æolic PlN *Δαῖνις[48] (not *Δαινίς as Æolic always retracts the accent).[49] There is a root-related verb: Hitt. *iškiye/a-* 'to anoint; to oil'[50] (< PA **sĝ-iyé/ó-*), which is not a derivative to Hitt. *šākan* (*pace* Rieken 1999: 294), but an old inherited zero-graded *-i̯e/o-* present, which would possibly surface as Lat. **săgiō* 'to smear; to grease; to anoint' (< Proto-It. **sag-iye/o-* with a *Sprossvokal*), the existence of which is required by its derivative *săgīna* [f.] '*fatty material; *lard'[51] (cf. Fr. *saindoux* [m.] 'lard' from simplex *sain* < Lat. *săgīna*), base-stem of a denominative verb *săgīnāre* 'to fatten (animals)'.[52]1

The derivational history of *ἐλαίϝᾱ [f.] 'olive tree' is more complex than expected: by comparison with Gk πλάτανος [f.] 'plane tree' ← *πλατανός [adj.] 'with broad leaves' (< PIE **pl̥t-h₂-(m)n-ó-* [adj.] 'broad', lit. *'endowed with width' ← PIE **plét-h₂-mon-* [m.] 'width'[53] >> Ved. *prathi-mán-* [m.] 'id.'), one would rather expect Proto-Gk *ἔλαιϝος [f.] ← *ἐλαιϝός [adj.]

[48]Starke (1990: 241, fn. 827a); Melchert (2003: 184); Simon (2017: 251, fn. 14).

[49]Cf. Steph. Byz. s.v. Ἐλαία. Ἐλαία· πόλις τῆς Ἀσίας Αἰολική, Περγαμηνῶν ἐπίνειον, ἡ *κ[α]ὶ *Δαῖνις ὠνομάζετο. "Elaia (is) an Æolic city of Asia, a harbour belonging to (the kingdom of) Pergamon, which was also known as Dainis." The *textus traditus* reads: ἡ †Κιδαινίς; corrected by Holsenius, cf. Zgusta (1984: 254). As pointed out by an anonymous reviewer, the restored reading is in fact attested in one the manuscripts of Stephan of Byzantium (Teffeteller 2015: 716, fn. 30). This town was in Mysia; it was a small harbour (lit. ἐπίνειον 'anchorage') located on the Lydian border (Zgusta 1984: 254). Its modern name is Kazıkbağları (Talbert 2000: 845, *s.v.* Elaa), where there are still olive trees. Perhaps formerly used as grape trellises, since Turk. *kazı* means 'stake' and *bağ* 'vineyard'.

[50]There is a *figura etymologica* attested in KBo 38.202 obv. 5: ˹x˺ *ša-gán-da iš-kán*[*-zi*] "They anoint with oil" (CHD Š/1: 36).

[51]Not in de Vaan (2008). This noun belongs to the well-known pattern of *răpiō* 'to seize and carry off' → *răpīna* [f.] 'robbery'.

[52]Alongside with 1-*săgīna* [f.] '*fatty material; *lard', there is 2-*săgīna* [f.] 'fattening; feeding; feasting', which is a verbal noun back-formed after *săgīnāre* 'to feed; fatten' (= *săgīnātiō* [f.] 'fattening') or *săgīnārī* 'to cram, stuff, feast' (of humans).

[53]Doubtlessly from a base-stem **plét-h₂, *pl̥t-éh₂-s* [PK] 'flatness; extension', whose oblique stem is reflected by OE *folda* [wk.f.] 'earth; ground; soil', gl. *terra firma* (< Proto-Gmc **fuldō*^{n}). For the meaning, compare Ved. *pr̥thivī́-* [f.] 'the Earth', lit. *'the extended and broad One' (< PIE **pl̥t-h₂-u̯-íh₂*).

'leafy'.[54] The masculine doublet *ἔλαιϝος [m.] 'wild olive tree' is possibly later than its feminine counterpart and thus cannot explain why the standard name for 'olive-tree' is not an epicene noun. Yet, there is evidence for double marking in the conversion adjective → feminine substantive: Proto-Gk *λαιϝός [adj.] 'left' (cf. Lat. *laevus* 'id.') → *λαίϝᾱ [f.] 'shield', cf. λαίας· ἀσπίδας. Κρῆτες and λαίβα· ἀσπίς. πέλτη (Hsch.).

As aforementioned, Proto-Gk *ἐλαιϝός [adj.] 'leafy' may regularly surface from PIE *h_1*l-eh*$_2$*-i̯u̯-ó-* [adj.] 'leafy' (for the phonetics, cf. Proto-Gk. *δαιϝήρ [m.] 'husband's brother' < PIE **deh*$_2$*-i-u̯-ér-*), which could be interpreted as the thematic variant of PIE *h_1*l-eh*$_2$*-i̯ú-* [adj.] 'leafy', whose base-stem is PIE *h_1*él-h*$_2$*,* *h_1*l-éh*$_2$*-* [PK] 'vegetal growth'. The PIE *-*i̯ú-*suffix is attested as a secondary derivative of PIE *-*eh*$_2$*-*stems (for instance Ved. *ūrṇāyú-* [adj.] 'woolen' from [virtual] PIE **u̯l̥h*$_1$*-n-eh*$_2$*-i̯ú-*). There was also a doublet *-*i̯ónt-* attested in PIE **b*$^{\hbar}$*l-eh*$_2$*-i̯ónt-* 'blossoming, blühend', from a stem **b*$^{\hbar}$*él-h*$_2$*,* **b*$^{\hbar}$*l-éh*$_2$*-* [PK] 'brightness, whiteness' built on a primary root **b*$^{\hbar}$*el-* 'to be white' (Garnier 2022: 6). The oblique stem **b*$^{\hbar}$*l-éh*$_2$*-* was eventually reanalyzed as a primary root (cf. Proto-Gmc **blōan* 'blühen'). PIE **b*$^{\hbar}$*l-eh*$_2$*-i̯ónt-* [adj.] 'blossoming, blühend' indirectly points to PIE **b*$^{\hbar}$*l-eh*$_2$*-i̯ú-* [adj.] 'id.' For such doublets, one may mention Ved. *bhuraṇyú-* [adj.] and *bhuraṇyánt-* 'quivering'. Likewise, PIE **sek-* 'to remove by cutting; to cut off/out' is the base of a verbal noun **sék-h*$_2$*,* **sk-éh*$_2$*-* [PK] 'cutting; removing' → PIE **sk-eh*$_2$*-i̯ú-* [adj.] 'deprived (from a body part)' → thematic doublet **sk-eh*$_2$*-i̯u̯-ó-* [adj.] 'disabled;

[54]That the olive tree may have been designated in Greek as 'the leafy one' could be confirmed by the fact that Gk θαλλός [m.] 'green twig' is especially said of the olive tree. See further Gk θαλλία [f.] 'foliage' and Arm. *dalar* [adj.] 'green; fresh'. The olive tree is notorious for growing suckers from the base of the trunk, making it almost immortal. Besides, as per Hashmi et al. (2015: 2), "(the olive tree) has many reedy branches with opposite branchlets". Furthermore, "the leaves are shortly stalked, lanceolate, sometimes ovate, narrow, oblong, coriaceous, leathery" (2015: 2). They look like bay leaves: both the name for 'olive tree' (Gk ἐλάα) and 'bay' (Gk δάφνη) are used by Theophrastus (*H.P.* 4.7.2) as approximative designations for the 'white mangrove' (*Avicennia marina*) that grows in swamps along the Red Sea coasts (as per Schneider 2017: 11). Like the olive tree, the white mangrove grows "thick leaves showing a bright green on the upper surface, and silvery-white, or grey, with very small hairs on the surface below." (Schneider 2017: 12).

deformed' → 'left-handed' → 'at left hand; left' (cf. Lat. *scaevus*; Proto-Gk *σκαιϝός). The root of Lat. *secāre* 'to cut off' is reconstructed with a final laryngeal: PIE **sekh*$_x$- (LIV^2: 524); **sekh*$_1$- (Kloekhorst 2008: 695), with PIE **sókh*$_1$*-ei̯* > Hitt. *šakki* '(s)he knows'; **sekh*$_1$- also in de Vaan (2008: 550-551).[55] I would rather assume here a primary root **sek*-.

There is perhaps an indirect reflex of PIE **sék-h*$_2$ [PK] 'cutting' as Hitt. **šēk* [nt.] 'cut (of a garment)', possibly base-stem of Hitt. *šēk-nu-* [c./nt.] 'cloak'. The phonetic development here assumed is confirmed by PIE **méĝ-h*$_2$ 'greatness' surfacing as Hitt. *mēk* 'much' (OS). Alongside with an abstract **sék-h*$_2$ [PK] 'cutting', there was also a PIE action noun **sék-h*$_2$*-r̥* [PK nt.] 'separation' → PIE **sk-h*$_2$*-én* [loc.adv.] 'separately' → **sk-h*$_2$*-én-t-* [adj.] 'cut out; separated' (with a characterizing morpheme **-t-*), surfacing as PA **skánt-* 'cut (of tissues); separated; decided; discerned; recognized; known'. With all due rigor, one should expect Hitt. ***iškant-*, with the same deletion of the laryngeal as seen in Hitt. *ištantāye/a-*^{zi} 'to stay put, to linger, to be late' from [virtual] PIE **sth*$_2$*-ent-eh*$_2$*-i̯é/ó-* 'to remain static' – a derivative of PIE **sth*$_2$*-ént-* 'standing' as per Kloekhorst (2008: 414). From **šēk* was derived a "new" zero grade **šakk-* (viz. Hitt. *šakk-ánt-* [prtcpl] 'known'). In my opinion, after Hitt. *šakk-ánt-* was back-formed a present stem with mobile accent: *šákk-i*, *šakk-ánzi* 'to know (about); be aware of; to know (something) is happening; to experience; to recognize' (meaning after CHD Š/1: 21). According to Kloekhorst (2008: 696), *-e*-graded forms must be secondary. Incidentally, it should be mentioned that Hitt. *šekk-ant-it* [instr.adv.] 'deliberately' (ZI-*it*; *še-ek-kán-ti-it*) indirectly points to Hitt. **šakk-an* [nt.] 'decision' – substantivization of Hitt. *šakk-ant-* *'decided'.

[55]Lat. *secō*, *secuī*, *sectum* 'to cut off' originates from Proto-It. **sekă-ye/o-*, [virtual] **sekă-w-ai*, **sekă-tum*, possibly coined after a nominal base **sekă-* appearing in Proto-It. **sekă-mən* (< PIE **sék-h*$_2$*-mn̥* [nt.] 'what is cut off'), first surfacing as OLat. **secumen*, *segminis* (< **secuminis* [with syncope]) → Lat. *segmen*, *segminis* [nt.] 'id.' Admittedly, U. **pruseśetu** [acc.nt.pl.] 'entrails' (< *°*sek-ēto-*) points to PIE **sekh*$_1$-, but such evidence is inconclusive, since the participles in *-ēto-* were productive in Umbrian: U. **maletu** 'molitum' (from U. **mal-* 'to grind' < PIE **mḷh*$_2$*-é/ó-*), for expected **malato-* (< < PIE **mḷh*$_2$*-etó-*). Even for **-eto-*, there are hesitations such as Fal. *meletom* vs. *melatom* 'molitum' (< PIE **melh*$_2$*-eto-* 'ground').

Turning back to vegetation, PIE **h₁él-h₂*, **h₁l-éh₂-s* 'vegetal growth' [PK] had an oblique **h₁l-éh₂-Ø* (with zero-ending) from which was derived PIE **h₁l-éh₂-u-* [adj.] 'leafy' → substantivized **h₁l-éh₂-u-* [nt.] 'leaf', recharacterized as **h₁l-éh₂-u-r* [nt.] 'leaf' (Luw. **laḫḫur* [nt.] 'leaf; leafy plant'). This archaic *Derivationskette* may be paralleled by three cases: (i) PIE **sk-éh₂-u-r* [nt.] 'deformity'; PIE **m̥ĝ-éh₂-u-r* [nt.] 'grandeur'; (iii) PIE **ĝl-éh₂-u-r* [nt.] 'splendor'.

(i) PIE **sek-* 'to cut; to remove by cutting' was endowed with an abstract noun **sék-h₂*, **sk-éh₂-* [PK] 'cutting out; ablation' → loc./obl. **sk-éh₂-Ø* 'in state of mutilation; in a state similar to mutilation' → delocative **sk-éh₂-u-* [adj.] 'deformed' which was substantivized as PIE **sk-éh₂-u-* [nt.] 'deformity', itself recharacterized as PIE **sk-éh₂-u-r* [nt.] 'id.' – base-stem of a possessive adjective **sk-eh₂-u-r-ó-* 'endowed with a malformation'. This adjective is reflected by Lat. *scaurus* [adj.] 'deformed at the feet' (also used as cognomen) and Late Ved. *khora-* [adj.] 'limping; lame' (Prakritic for **skorá-*).[56]

(ii) PIE **mégˑ-h₂*, **m̥ĝ-éh₂-* [PK] 'greatness' had a locative/oblique **m̥ĝ-éh₂-Ø* 'in state of greatness'[57] → delocative **m̥ĝ-éh₂-u-* [adj.] 'majestic' → **m̥ĝ-éh₂-u-* [nt.] 'grandeur' → **m̥ĝ-éh₂-u-r* [nt.] 'id.' There was a possessive adjective **m̥ĝ-eh₂-u-r-ó-* [possessive adj.] 'endowed with grandeur' (Hes. ἀγαυρός [adj.] 'majestic; proud' [said of a bull in *Theog.* 832]). Interestingly, Gk ἀγαυρός [adj.] 'majestic' has influenced γλαυρός [adj.] *'illustrious' (see following Section), whence the meaning of Gk γλαυρόν· σεμνόν 'majestic' (Hsch.). Note also ἀγαυρότατα [nt.pl.adv.] 'with great splendor' (Hdt 7.51.1). To sum up, Hes. ἀγαυρός [adj.] 'majestic' (< PIE **m̥ĝ-eh₂-u-r-ó-* [adj.] 'endowed with grandeur') was crossed with γλαυρός [adj.] *'splendid; illustrious' (< PIE **ĝl-eh₂-u-r-ó-* [adj.] 'endowed with splendor'). As a result, ἀγαυρός was reshaped as γαῦρος [adj.] 'proud, arrogant' (Archil.) with deletion of

[56]Differently Mayrhofer (KEWAi I: 312 and EWAia I: 456) advocates non-IE origin. But Pkt *khoḍa*, *khola-* (lex.) can be secondary after older *khora-* (Georges-Jean Pinault, pers. com.). For the *Wortbildung* of Lat. *scaurus*, see also Garnier and Sagot (2019: 37, fn. 16).

[57]Base-stem of PIE **m̥ĝ-éh₂-en* [adv.] 'greatly; excessively' > Æol. ἄγᾱν [adv.] 'much; too much' (< Proto-Gk **ἀγᾱν*). For the interpretation of PIE **mégˑ-h₂* as an old PK abstract meaning 'greatness', see Pinault (2012: 404-406).

initial ἀ-; by contrast, Hom. *ἀγλαϝός [adj.] '*bright; splendid; illustrious' shows a spurious ἀ-.[58]

(iii) Arm. *całr* [*-u-*] 'laughing, laughter', *cicałim* 'to laugh' and Hom. γελάω 'to smile, to laugh' (possibly from *γέλας [nt.] 'laught') are unanimously accounted for by a PIE root **ĝelh₂-* 'to burst out with laughter' (LIV²: 162, *in Lachen ausbrechen*). Yet, Hom. γελάω means 'to shine' (not †'to laugh'!) in T 362, γέλασσε δὲ πᾶσα περὶ χθών# χαλκοῦ ὑπὸ στεροπῆς "all around the earth shone with the glitter of bronze." Within Greek, there is evidence for a root γελα-/*γλᾱ- 'to shine' reflected by γελάω 'to smile, to laugh'[59] and also by γλήνη [f.] 'eyeball', which requires Proto-Gk *γλᾱνός [adj.] 'bright'.[60] Interestingly, there is also a nominal base γλαυ- unambiguously meaning 'to shine'.[61] As a result, de Lamberterie (1978: 273) posits a root **ĝel-h₂-* 'to shine' (in his notation), with a Benvenistian 'thème II' **ĝl-eh₂-*, which he assumes to be a verbal base for a primary *-u-*adjective (viz. PIE **ĝléh₂-u-* 'bright').

Gk γέλας [nt.] 'laughter' (reflected by γελαστός [adj.] 'ridiculous') and also 'smile; joy' (cf. γελᾱνής 'happy; cheerful' at Pindarus – adaptation of *γελᾱνός < *γελασ-νός) was replaced since Homer by γέλως [m.] 'laughter' (Post-Hom.

[58]See also Hom. ἀγαυός [adj.] 'illustrious; noble' rendering Æol. *ἀγαϝ-ός – rather *ἄγαϝ-ος – (references at Beekes 2010: 9). The adjective *ἀγαϝ-ός is a doublet of ἀγαυρός resegmented as *ἀγαϝ-ρός. Likewise, Hom. *ἀγλαϝός necessarily requires an adjective (*)ἀγλαυρός, whose existence may be thus vindicated. The Epic present ἀγαίομαι [mid.] 'to be offended at' (governing acc.) could reflect *ἀγάϝ-γομαι 'to consider great or excessive' – for the meaning, cf. Hom. ἄγαμαι 'id.' and μεγαίρω 'id.' which are both "attributive" denominatives. This points to a synchronic nominal base *ἀγαϝ- 'great; excessive'.

[59]For the meaning, compare Lat. *re-nīdeō* 'to shine back; to shine or beam for joy; to smile; to laugh'.

[60]Cf. also Hom. γλῆνος* [nt.] 'shiny object', only at the plural in Ω 192 (γλήνεα 'thinkets').

[61]At Hesychius: γλαυκῶπις· λαμπρόφθαλμος 'shining-eyed' (of Athena only); γλαυσόν· λαμπρόν 'bright'; γλαυκός· λευκός 'bright white' and γλαύσσει· λάμπει 'to shine' (< Proto-Gk *γλαύκ-γε/ο-). Technical word γλαυκότης [f.] 'brightness; flame of the eyes or the glance'. These forms are surely unrelated to Gk 2-γλαυκός [adj.] 'blueish-green or grey' (always of the sea), which may originate from the owl's (Gk γλαῦξ) greenish sparkling eyes – by contrast with 1-γλαυκός (< PIE **ĝl-eh₂-u-k-ó-*).

gen.sg. -ωτος), just like *ἔρας [nt.] 'love' (cf. ἐραστός) was replaced by ἔρως, ἔρωτος [m.] 'id.' As a result, it is somehow far-fetched to analyse Arm. *całr* [-*u*-] as the reflex of PIE **ĝélh₂-ōs*, **ĝl̥h₂-s-ós* of holokinetic inflection (*pace* Olsen 1999: 169). It is more straightforward to assume a PK adjective **ĝléh₂-u-*, **ĝl̥h₂-éu̯-* 'bright; glad; joyful', whose weak stem was eventually generalized (**ĝl̥h₂-ú-* [adj.] 'joyful' → **ĝl̥h₂-ú-* [nt.] 'laughter' > Proto-Arm. **cału+-r* > Arm. *całr*).

The unmotivated *Schwebeablaut* attested in Greek cannot be easily accounted for, all the more so as Greek has a well-known tendency to generalize the weak stem of *-u*-adjectives (cf. βαρύς [adj. 'heavy'), which would make a "metathesis" **ĝélh₂-u-* → **ĝléh₂-u-* [adj.] 'bright' (Gk γλαυ-) more than unlikely. In my opinion, the Greek data may rather point to PIE **ĝél-h₂*, **ĝl-éh₂-* [PK] 'brightness' → loc./obl. **ĝl-éh₂-Ø* 'in state of brightness' → delocative **ĝl-éh₂-u-* [adj.] 'splendid', which was substantivized as PIE **ĝl-éh₂-u-* [PK *-u*-nt.] 'brightness; shine; radiance; splendor' with *Neutralemotion*, before being recharacterized as PIE **ĝl-éh₂-u-r* [nt.], after which was built a possessive adjective: PIE **ĝl-eh₂-u-r-ó-* [adj.] 'endowed with splendor; splendid; illustrious', surfacing as Proto-Gk *γλαυρός [adj.] 'bright; illustrious'.[62] Gk γλαυρόν· σεμνόν 'majestic' (Hsch.) has been influenced by its close synonym ἀγαυρός [adj.] 'majestic' (but rather 'splendid' at Herodotus!).

Nothing stands in the way of assuming a primary root **ĝel-* 'to shine', making thus Proto-Gk *γέλας [nt.] 'laughter' (< PIE **ĝél-h₂-s-* [nt.] 'shining') a secondary derivative following the same pattern as Gk κέρας [nt.] 'horn' (< PIE **ḱér-h₂-s-*), as per Nussbaum (1986: 142). Incidentally, the Greek nominal base γλαυκ- may be accounted for by PIE **ĝl-éh₂-u-k-* 'the shining one' with a characterizing morpheme **-k-*. The *owl* (Gk γλαῦξ [f.]) is remarkable for its greenish eyes sparkling in the darkness.

[62]Hsch. γλαινοί· τὰ λαμπρύσματα τῶν περικεφαλαιῶν, οἷον ἀστέρες 'ornaments of helmets, like stars' points to an adjective *γλαινός 'starry; star-shaped' (< *γλαϝ-ινός), coined after a masculine *γλάϝ-ος 'star', which involves a synchronic root *γλαϝ- 'to shine' extrapolated from γλαυρός [adj.] *'bright, shiny'.

. Concluding remarks

This paper takes up Simon's (2013: 108) claim of a Luwian secondary derivative **laḫḫur-na* [coll.pl.] 'leafage, foliage' vs. simplex **laḫḫur* [nt.] 'leaf; leafy plant' (< PIE **h_1l-éh$_2$-u-r*). The underestimated importance of the nouns of the type **CéC-h$_2$*, **CC-éh$_2$-* of proterokinetic inflection needs to be addressed in the future, as well as the pervasiveness of decasuative derivation in PIE. The bare oblique stem **CC-éh$_2$-Ø* could serve as a derivational base for external derivation of *-u*-stems (PIE **CC-éh$_2$-u-* [PK adj.] 'being in state of X/endowed with X'). By conversion, these stems could produce neuters (**CC-éh$_2$-u-* [PK nt.]), which were eventually recharacterized by a non-heteroclitic morpheme **-r* (viz. **CC-éh$_2$-u-r* [nt.]). Another meaningful contribution of this study is to provide Proto-Gk **ἐλαίϝᾱ* [f.] 'olive tree' with an unsuspected PIE pedigree: Proto-Gk **ἐλαιϝός* [adj.] 'leafy' points to PIE **h_1l-eh$_2$-i̯u̯-ó-*, thematic variant of PIE **h_1l-eh$_2$-i̯ú-* [adj.] 'leafy', derived from PIE **$h_1$él-h$_2$* 'rising; vegetal growth' based on a newly identified PIE primary root **$h_1$el-* 'to go out; to rise; to grow'.

Abbreviations

CHD = Güterbrock & Hoffner 1980-
eDiAna = Miller, Rieken, Hackstein & Yakubovich 2017
EWAhd = Lühr 2014
EWAia = Mayrhofer 1986-2001
HED = Puhvel 1984-
HEG = Tischler 1977-2016
IEW = Pokorny 1957/1969
KBo = KBo 1916-
KEWAi = Mayrhofer 1956-1976
KTU^1 = Dietrich, Loretz & Sanmartín 1976
KUB = Staatliche Museen zu Berlin, Vorderasiatische Abteilung and Deutsche Orient-Gesellschaft 1921
LIV^2 = Rix et al. 2001

References

Ačaŕyan, Hrač'ya Hakobi
1937 De l'affinité du grec et de l'arménien. In: *Mélanges Émile Boisacq*, Volume I. *Annuaire de l'Institut de Philologie et d'Histoire Orientales et Slaves* 5, 3-4. Bruxelles: Université libre de Bruxelles.

Aurra Jorro, Franciso
1999 Diccionario griego-español. Anejo I. Diccionario Micénico [DMic.]. 2 vols. Bajo la dirección de Francisco R. Adrados. Madrid: Consejo Superior de Investigationes Científicas.

Bartoněk, Antonin
2003 *Handbuch des mykenischen Griechisch*. Heidelberg: Universitätsverlag C. Winter.

Beekes, Robert S. P.
2003 Historical phonology of Classical Armenian. In: Frederick Kortlandt, *Armeniaca. Comparative Notes. With an Appendix on the Historical Phonology of Classical Armenian by Robert S. P. Beekes,* 133-211. Ann Arbor: Caravan Books.
2010 *Etymological Dictionary of Greek*. With the assistance of Lucien van Beek. Leiden Indo-European Etymological Dictionary Series. Edited by Alexander Lubotsky, Vol. 10 (10/1-10/2). Leiden, Boston: Brill.

Carruthers, Clive. H.
1933 More Hittite Words. *Language* 9: 151-161.

Casaretto, Antje
2004 *Nominale Wortbildung der gotischen Sprache. Die Derivation der Substantive*. Heidelberg: Universitätsverlag Winter.

Clackson, James
2005 Review of Frederik Kortlandt, *Armeniaca: Comparative Notes; With an Appendix on the Historical Phonology of Classical Armenian by Robert S. P. Beekes*. 2003. Ann Arbor: Caravan Books. *Annual of Armenian Linguistics* 24-25: 153-158.

Clodoveo, Maria Lisa et al.
2014 In the ancient world, virgin olive oil was called "liquid gold" by Homer and "the great healer" by Hippocrates. Why has this mythic image been forgotten? *Food Research International*, Volume 62, August 2014: 1062-1068.

Derksen, Rick
2008 *Etymological Dictionary of the Slavic Inherited Lexicon*. Leiden Indo-European Etymological Series, Vol. 4. Leiden, Boston: Brill.

2015 *Etymological Dictionary of the Baltic Inherited Lexicon*. Leiden Indo-European Etymological Series, Vol. 13. Leiden, Boston: Brill.

Dietrich, Manfred, Oswald Loretz and Joaquín Sanmartín
1976 *Die keilalphbetischen Texte aus Ugarit. Einschliesslich der keilalphabetischen Texte ausserhalb Ugarits.* 1st edn. [KTU[1]], Alter Orient und Altes Testament 24/1. Kevelaer/Neukirchen, Vluyn: Verlag Buzon & Berker.

Elderkin, George Wicker
1939 The Bee of Artemis. *The American Journal of Philology* 60: 203-213.

Garnier, Romain
2021a Nouvelles réflexions sur les neutres en *-*us*- : un suffixe résiduel. In: Alain Blanc et Isabelle Boehm (eds.), *Dérivation nominale et innovations dans les langues indo-européennes anciennes.* Proceedings of the International Gathering held in the University of Rouen (ÉRIAC), 2018, 11th-12th October, 39-52. Collection Littérature et Linguistique, Vol. 3. Lyon: MOM éditions.
2021b The PIE Word for 'Name'. In: Hannes A. Fellner, Melanie Malzahn and Michaël Peyrot (eds.), lyuke wmer ra. *Indo-European Studies in Honor of Georges-Jean Pinault*, 152-163. Ann Arbor: Beech Stave Press.
2022 Germanic weak verbs reanalyzed as strong ones: A survey. In: Paul Widmer (ed.), *XVI. Fachtagung der Indo-germanischen Gesellschaft "Jenseits der Formenlehre: Indogermanische Morphologie mit Grauzonen- und Schnittstellenphänomenen"*, Bd 167, 1-28. Innsbruck: Institut für Sprachwissenschaft.

Garnier, Romain and Jacques François
2020 Review of Guus Kroonen, James P. Mallory, Bernard Comrie (eds.). *Talking Neolithic. Proceedings of the workshop on Indo-European origins held at the Max Planck Institute for Evolutionary Anthropology, Leipzig, December 2-3, 2013.* 2018. *Journal of Indo-European Studies* Monograph Series 65, Washington DC: Institute for the Study of Man. *Bulletin de la Société de Linguistique de Paris* 115/2: 48-63.

Garnier, Romain and Benoît Sagot
2019 Metathesis of Proto-Indo-European Sonorants. *Münchener Studien zur Sprachwissenschaft* 73/1: 29-53.

Goedegebuure, Petra
2010 The Luwian adverbs *zanta* 'down' and **anni* 'with, for, against'. In: Aygül Süel (ed.), *Acts of the VIIth International Congress of Hittitology*, Çorum, 25-31 August, 2008, 299-318. Ankara: Çorum Valiligi.

Grand-Clément, Adeline
2018 La saveur de l'immortalité: les mille et une vertus de l'ambroisie et du nectar dans la tradition homérique. *Pallas* 106 ("Goûts et odeur dans l'antiquité"): 69-83.

Greppin, John A. C.
1981 Armenian *laxur*, Hittite *laḫḫur*. *Revue des études arméniennes* 15: 5-9.

Güterbrock, Hans and Harry A. Hoffner
1980- *Chicago Hittite Dictionary* [CHD]. Chicago: The Oriental Institute of the University of Chicago.

Hashmi, Muhammad Ali et al.
2015 Traditional uses, phytochemistry, and pharmacology of olea europaea (olive). *Evidence-Based Complementary and Alternative Medicine*, Volume 2015. www.hindawi.com/journals/ecam/2015/541591/

Heidermanns, Frank
1993 *Etymologisches Wörterbuch der germanischen Primäradjektive*. Berlin, New York: Walter de Gruyter.

Hoffner, Harry A.
1966 Review of Onofrio Carruba, *Das Beschwörungsritual für die Göttin Wisuriyanza*. 1996 Wiesbaden: Otto Harrassowitz. *JAOS* 88 [1968]: 531-534.

Hoffner, Harry A. Jr. and H. Craig Melchert
2008 *A Grammar of the Hittite Language. Part I: Reference Grammar*. Winona Lake: Eisenbrauns.

Hübschmann, Heinrich
1897 *Armenische Grammatik. I. Theil. Armenische Etymologie*. Leipzig: Druck und Verlag von Breitkopf und Härtel.

Imberciadori, Giulio
2022 Sul lessema indoeuropeo per 'idromele; bevanda alcolica (dolce); miele'. *Lumina* 6: 13-32.

Jasanoff, Jay Harold
2003 *Hittite and the Indo-European Verb*. Oxford: Oxford University Press.

Kapellakis, Iosif Emmanouil et al.
2008 Olive oil history, production and by-product management. *Reviews in Environmental Science and Biotechnology* 7: 1-26.

KBo
1916- *Keilschrifttexte aus Boghazköi*. Bd. 1-22. Leipzig, Berlin.

Kölligan, Daniel
2008 Vedisch *nigút-* 'Feind, Übeltäter'. *Historische Sprachforschung* 120: 134-141.

Kloekhorst, Alwin
2006 Initial Laryngeals in Anatolian. *Historische Sprachforschung* 119: 77-108.
2008 *Etymological Dictionary of the Hittite Inherited Lexicon* [EDHIL]. Leiden Indo-European Etymological Dictionary Series, Vol. 5. Leiden, Boston: Brill.

Kronasser, Heinz
1966 *Etymologie der hethitischen Sprache*, Vol. 1. Wiesbaden: Harrassowitz.

Kroonen, Guus G.
2011 *The Proto-Germanic* n*-stems. A study in diachronic morphophonology*. Leiden Studies in Indo-European, Vol. 18. Amsterdam, New York: Rodopi.
2013 *Etymological Dictionary of Proto-Germanic*. Leiden Indo-European Etymological Dictionary Series, Vol. 11. Leiden, Boston: Brill.

de Lamberterie, Charles
1978 Armeniaca I-VIII : études lexicales. *Bulletin de la Société de Linguistique de Paris* 73/1: 243-285.

Lühr, Rosemary (ed.)
2014 *Etymologisches Wörterbuch des Althochdeutschen* [EWAhd]. Band V iba-luzzilo. Göttingen: Vandenhoeck & Ruprecht.

Malzahn, Melanie
2010 *The Tocharian Verbal System*. Brill's Studies in Indo-European Languages and Linguistics, Vol. 3. Leiden, Boston: Brill.

Martirosyan, Hrach K.
2010 *Etymological Dictionary of the Armenian Inherited Lexicon*. Leiden Indo-European Etymological Dictionary Series, Vol. 8. Leiden, Boston: Brill.

Matasović, Ranko
2009 *Etymological Dictionary of Proto-Celtic*. Leiden Indo-European Etymological Dictionary Series, Vol. 9. Leiden, Boston: Brill.

Matzinger, Joachim
2006 Altarmenisch *ewł/iwł* 'Öl'. In: Anna Krasnowolska, Kinga Maciuszak, Barbara Mękarska (eds.), *In the Orient Where the*

Gracious Light...: Satura Orientalis In Honorem Andrzej Pisowicz, 71-72. Kraków: Księgarnia Akademicka.

Mayrhofer, Manfred
1956-1976 *Kurzgefaßtes etymologisches Wörterbuch des Altindindischen*, *A Concise Etymological Sanskrit Dictionary* [KEWAi]. 3 volumes. Heidelberg: Carl Winter Universitätsverlag.
1986-2001 *Etymologisches Wörterbuch des Altindoarischen* [EWAia], 3 volumes. Heidelberg: Carl Winter.

Melchert, H. Craig
1984 *Studies in Hittite Historical Phonology*. Göttingen: Vandenhoeck and Ruprecht.
1988 Luvian Lexical Notes. *Historische Sprachforschung* 101/2: 211-243.
1994 *Anatolian Historical Phonology*. Leiden Studies in Indo-European, Vol. 3. Amsterdam Atlanta: Rodopi.
2003 Language. In: H. C. Melchert (ed.), *The Luwians*. Handbook of Oriental Studies. Section One: The Near and Middle East, Vol 68, 170-190. Leiden, Boston: Brill.
2011 The PIE Verb 'to pour' and Medial *$*h_3$* in Anatolian. In: Stephanie W. Jamison, H. Craig Melchert, and Brent Vine (eds.), *Proceedings of the 22nd Annual UCLA Indo-European Conference*, 127-132. Bremen: Hempen.
2016 Initial **sp-* in Hittite and *šip(p)and-* 'to libate'. *Journal of Language Relationship • Вопросы языкового родства* 14/3: 187-196.
2021 Hittite neuter *i*-stems. In: Hannes A. Fellner, Melanie Malzahn and Michaël Peyrot (eds.), lyuke wmer ra. *Indo-European Studies in Honor of Georges-Jean Pinault*, 379-390. Ann Arbor: Beech Stave Press.

Melchert, H. Craig and Norbert Oettinger
2009 Ablativ und Instrumental im Hethitischen und Indogermanischen. Ein Beitrag zur relativen Chronologie. *Incontri Linguistici* 32: 53-73.

Miller, Jared, Elisabeth Rieken, Olav Hackstein and Ilya Yakubovich (eds.)
n.d. *Digital Philological-etymological Dictionary of the Minor Ancient Anatolian Corpus Languages* [eDiAna]. https://www.ediana.gwi.uni-muenchen.de/

Nikolaev, Alexander
2010 Time to gather stones together. In: Stephanie W. Jamison, H. Craig Melchert, and Brent Vine (eds.), *Proceedings of the 21st Annual UCLA Indo-European Conference*, 189-206 Bremen: Hempen.

Nishimura, Kanehiro
2010 Patterns of Vowel Reduction in Latin: Phonetics and Phonology. *Historische Sprachforschung* 123: 217-257.

Nussbaum, Alan J.
1986 *Head and Horn in Indo-European*. Untersuchungen zur indogermanischen Sprach- und Kulturwissenschaft, Neue Folge, Bd. 2. Berlin, New York: Walter de Gruyter.

Oettinger, Norbert
1979 *Das Stammbildung des hethitischen Verbums*. Nürnberg: Verlag Hans Carl.

Olsen, Birgit Anette
1999 *The Noun in Biblical Armenian*. Trends in Linguistics. Studies and Monographs 119. Berlin, New York: Mouton de Gruyter.

Onians, Richard Broxton
1988 *The Origins of European Thought about the Body, the Mind, the Soul, the World, Time and Fate*. (2nd edn.). Cambridge: Cambridge University Press. (Reprinted 1951)

Ozoliņš, Kaspars
2015 *Revisiting Proto-Indo-European Schwebeablaut. A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Indo-European Studies*. Los Angeles: University of California. https://escholarship.org/uc/item/80g7t61x#author

Palmer, Leonard, R.
1963 *The Interpretation of Mycenaean Greek Texts*. Oxford: Clarendon Press.

Peeters, Martin
1980 *Untersuchungen zur Vertretung der indogermanischen Laryngale im Griechischen*. SÖAW 377. Wien: Verlag der Österreichischen Akademie der Wissenschaften.

Pinault, Georges-Jean
2003 Sur les thèmes indo-européens en *-*u*-: dérivation et étymologie. In: Eva Tichy, Dagmar S. Wodtko, and Britta Irslinger (eds.), *Indogermanisches Nomen. Derivation, Flexion und Ablaut*. Akten der Arbeitstagung der Indogermanischen Gesellschaft (Freiburg, 19. bis 22. September 2001), 153-188. Bremen: Hempen Verlag.
2011 L'origine déictique du genre féminin en indo-européen." *Bulletin de la Société de Linguistique de Paris* 106/1: 129-182.
2012 Remarks on PIE amphikinetic and hysterokinetic nouns. In: Benedicte Nielsen Whitehead, Thomas Olander, Birgit Anette Olsen and Jens Elmegård Rasmussen (eds.), *The Sound of Indo-European. Phonetics, Phonemics and Morphophonemics*, 399-424. Copenhagen: Museum Tusculanum Press.
2014 Distribution and Origins of the PIE Suffixes *-*ih*$_2$. In: Norbert Oettinger and Thomas Steer (eds.), *Das Nomen im*

Indogermanischen. Morphologie, Substantiv versus Adjektiv, Kollektivum. Akten der Arbeitstagung der Indogermanischen Gesellschaft vom 14. bis 16. September 2011 in Erlangen, 273-306. Wiesbaden: Reichert Verlag.

2017 Tocharian B *paitār** 'calf', Vedic *pitú-* 'food' and Indo-European nominal derivation. *Wékʷos* 3: 149-176.

2020 Tocharian lexicon in the light of contact phenomena. In: Romain Garnier (ed.), *Loanwords and Substrata.* Proceedings of the Colloquium held in Limoges (June 5th-7th 2018), 367-401. Innsbrucker Beiträge zur Sprachwissenschaft, Bd 164. Innsbruck: Institut fur Sprachwissenschaft der Universitat Innsbruck.

2022 Suffixes from roots: the case of PIE *-*bʰo-* and related issues. In: Melanie Malzahn, Hannes A. Fellner and Theresa-Susanna Illés (eds.), *Zurück zur Wurzel. Struktur, Funktion und Semantik der Wurzel im Indogermanischen.* Akten der 15. Fachtagung der Indogermanischen Gesellschaft vom 13. bis 16. September in Wien, 235-246. Wiesbaden: Reichert Verlag.

Poucha, Pavel

1955 *Institutiones Linguae Tocharicae. Pars I. Thesaurus Linguae Tocharicae Dialecti* A. Praha: Statní Pedagogickě Nakladatelství.

Pokorny, Julius

1957/1969 *Indogermanisches etymologisches Wörterbuch* [IEW]. 2 volumes. Tübingen, Bern, Munich: A. Francke.

Puhvel, Jaan

1984- *Hittite Etymological Dictionary* [HED]. Berlin, New York: Mouton de Gruyter.

Rieken, Elisabeth

1999 *Untersuchungen zur nominalen Stammbildung des Hethitischen.* Studien zu den Boğazköy-Texten 44. Wiesbaden: Harrasowitz.

Rix, Helmut et al.

2001 *Lexikon der indogermanischen Verben. Die Wurzeln und ihre Primärstammbildungen* 2nd edn. [LIV²]. Wiesbaden: Reichert.

Sagot, Benoît

2020 A new PIE root **h₁er-* '(to be/become) dark red'. In: Romain Garnier (ed.), *Loanwords and Substrata.* Proceedings of the Colloquium held in Limoges (June 5th-7th 2018), 403-409. Innsbrucker Beiträge zur Sprachwissenschaft, Bd 164. Innsbruck: Institut fur Sprachwissenschaft der Universitat Innsbruck.

Schneider, Pierre

2017 On the Red Sea the trees are of a remarkable nature (Pliny the Elder): The Red Sea mangroves from the Greco-Roman perspective. In: A. Agius Dionysius et al. (eds.), *Human Interaction*

with the Environment in the Red Sea: Selected Papers of Red Sea Project VI, 9-29. Leiden: Brill Academic Pub.

Shi, Yuan Yuan et al.
2011 Diet and Cell Size Both Affect Queen-Worker Differentiation through DNA Methylation in Honey Bees (Apis mellifera, Apidae). *PloS ONE* 6/4: e18808. Online edition, published on April 26th 2011. https://doi.org/10.1371/journal.pone.0018808 (last accessed on July 22nd 2022).

Simon, Zsolt
2013 Die These der hethitisch-luwischen Lehnwörter im Armenischen. Eine kritische Neubetrachtung. *International Journal of Diachronic Linguistics and Linguistic Reconstruction* 10/2: 97-135.
2015 Das unerwartete <u> in der altassyrischen Nebenüberlieferung hethitischer Wörter. In: Ronald I. Kim et al. (eds.), *Hrozný and Hittite: The First Hundred Years*. Proceedings of the International Conference Held at Charles University, Prague, 11-14 November 2015, 354-364. Leiden, Boston: Brill.
2017 δέπας und die anderen: Spuren eines verschwollenen luw(o)iden Dialekts? *Wékʷos* 3: 245-259.
2020 Latin *sāpō* 'hair-dye, soap', the Germanic Words for Soap, and the Common Substrate of Celtic and Germanic. *Amsterdamer Beiträge zur älteren Germanistik* 80: 391-400.

Smoczyński, Wojcieh
2007 *Lietuvų kalbos etimologinis žodinas/Słownik etymologiczny języka litewskiego*. Vilnius: Uniwersytet Wilenski.

Starke, Frank
1990 *Untersuchung zur Stammbildung des keilschrift-luwischen Nomens*. Studien zu den Boğazköy-Texten 31. Wiesbaden: Harrassowitz.

Staatliche Museen zu Berlin, Vorderasiatische Abteilung and Deutsche Orient-Gesellschaft
1921 Keilschrifturkunden aus Boghazköi [KUB]. Berlin: Akademie-Verlag.

Talbert, Richard J. A.
2000 *Map-by-Map Directory to Accompany Barrington Atlas of the Greek and Roman World*. Princeton: Princeton University Press.

Teffeteller, Annette
2015 Songs by Land and Sea Descending: Anatolian and Aegean Poetic Traditions. In: Nikolas Chr. Stampolidis, Çidem Maner, and Konstantinos Kopanias (eds), *Nostoi: Indigenous Culture, Migration and Integration in the Aegean Islands and Western Anatolia during the Late Bronze and Early Iron Age*, 709-735. Istanbul: Koç University Press.

Tischler, Johann
1977-2016 *Hethitisches etymologisches Glossar* [HEG]. 4 volumes (I, II/1, II/2, III, IV), 16 Leaflets. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
2001 *Hethitisches Handwörterbuch, Mit dem Wortschatz der Nachbarsprachen* [HHW]. Innsbrucker Beiträge zur Sprachwissenschaft, Bd 128. Innsbruck: Institut fur Sprachwissenschaft der Universitat Innsbruck.

Torrecilla, José S.
2010 *The Olive: Its Processing and Waste Management*. Food Science and Technology Series. New York: Nova Science Publishers, Inc.

de Vaan, Michiel
2008 *Etymological Dictionary of Latin and the Other Italic Languages*. Leiden Indo-European Etymological Dictionary Series, Vol. 7. Leiden, Boston: Brill.

Yakubovich, Ilya
2006 The Free-Standing Genitive and Hypostasis in Hittite. *Journal of Near Eastern Studies* 65/1, 39-49.
2016 Response to Craig Melchert (viz. Melchert 2016 Initial **sp*- in Hittite and *šip(p)and*- 'to libate'). *Journal of Language Relationship • Вопросы языкового родства* 14/3: 196-205.

Yon, Marguerite and Daniel Arnaud (eds.)
2001 *Études ougaritiques, I: Travaux 1985-1995. Ras Shamra-Ougarit 14* [RSOu]. Paris: Publications de la Mission Française Archéologique de Ras Shamra-Ougarit.

Zgusta, Ladislav
1984 *Kleinasiatische Ortsnamen* [KON]. Heidelberg: Carl Winter Universitätsverlag.